ELECTRONIC BANKING AND PERFORMANCE OF COMMERCIAL BANKS IN

UGANDA:

A CASE STUDY OF CENTENARY BANK

BY

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REG. NO

17/U/14454/GMBA/PE

A DISSERTATION SUBMITTED TO KYAMBOGO UNIVERSITY GRADUATE

SCHOOL IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE

AWARD OF A MASTER$ DEGREE IN BUSINESS ADMINISTRATION

OF KYAMBOGO UNIVERSITY

NOVEMBER, 2019

DECLARATION

I, **Benon Nfukirani** hereby declare that, this is my original work and has not been presented to any University or institutions of higher learning for any academic award. Where secondary sources of information used in this work, have been acknowledged.

Date: ....8/.4/.19....................

Signed ....

APPROVAL

This dissertation has been written under our supervision and has been submitted for the award of the degree of Masters in Business Administration with our approval as Kyambogo University supervisors.
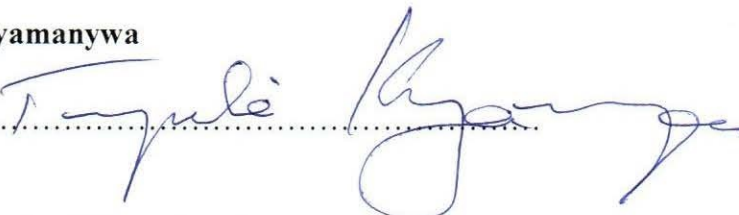
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DEDICATION

This dissertation is dedicated to my family more especially my wife and children who tolerated me as "an absentee of the family" during the years I spent pursuing the course.

ACKNOWLEDGEMENT

With thankful and heartfelt appreciation, I acknowledge the contribution of my supervisors, Dr. Gerald Kasigwa and Dr. Teopista Kyamanywa for their parental and academic guidance, commitment and readiness to help, including the professional listening skills rendered to me towards the completion of this work. May the almighty God bless them abundantly.

I acknowledge with gratitude the contributions and co-operation made by Centenary Bank Staff for their willingness to provide the necessary information when I visited their respective desks during the research process. Without their cooperation, this study would have been impossible to accomplish.

I would like to deeply thank all my lecturers at Kyambogo University who adequately guided and equipped me with both theoretical and practical skills. I would also like to acknowledge the contribution of my classmates of Kyambogo University from whom I enjoyed fruitful discussions on challenging topics.

I also thank my colleagues at work who always stood in for me. Special appreciation also goes to my employers for their financial and moral support.

Finally, for those not mentioned here, thanks very much for your contribution.

MAY GOD BLESS YOU ALL

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LIST OF ACRONYMS

ATM	Automatic Teller Machine
BOU	Bank of Uganda
CERUDEB	Centenary Rural Development Bank
CVI	Content Validity Index
E-banking	Electronic Banking
EFT	Electronic Fund Transfer
PAR	Portfolio at Risk
SPSS	Statistical Package for Social Scientists

ABSTRACT

The general objective of the study was to assess the relationship between electronic banking and performance of commercial banks in Uganda with specific reference to Centenary Bank. The study was guided by the following objectives: to establish the relationship between Electronic funds transfer and the performance of Centenary Bank, to examine the relationship between telephone banking and the performance of Centenary Bank and to assess whether there is a relationship between internet banking and the performance of Centenary Bank. A case study research design was used. The study predominantly employed a quantitative approach but also used a qualitative approach. The study population consisted of 195 participants. A sample size of 161 respondents was selected using simple and purposive sampling techniques. Quantitative data analysis mainly consisted of descriptive statistics (percentages, mean and standard deviation) and inferential statistics (Pearson correlation coefficient and linear regression). Content analysis was used to analyze qualitative data. Findings revealed that there is a significant and positive relationship between E-funds transfer and performance of Centenary bank (r. value of .472**and significant value at 0.000). Secondly, there is a significant and positive relationship between telephone banking and performance of Centenary bank (r. value of .540**and significant value at 0.000). Lastly, the findings indicated that internet banking has a positive and significant relationship with performance of Centenary Bank (r. value of .539**and significant value at 0.000). It is concluded that there is a significant and positive relationship between electronic banking and performance of Centenary Bank. Thus, it is recommended that for purposes of promoting E-funds transfer towards performance, trust building among the customers should be a major concern for Centenary Bank while improving the usefulness of electronic banking. In order to achieve more with telephone banking on performance, it is imperative that Centenary Bank ensures that security and privacy are in place to monitor and evaluate the usage of the implemented technologies and on internet banking and performance of Centenary Bank, the bank needs to make sure that awareness about online banking is created in the public through massive advertisement on radios, televisions and newspapers.

CHAPTER ONE

INTRODUCTION

1.1 Introduction

This study sought to assess the relationship between electronic banking and performance of commercial banks in Uganda with specific reference to Centenary Bank. Electronic banking is one of the major emerging trends in the banking industry however the likely outcome of it was not yet leveraged by majority of the commercial banks especially in the context of Uganda (UBA, 2016). This chapter majorly expounds on the background of the study, the problems which fostered the undertaking of the study, the study purpose, and the specific objectives which guides the development of the research hypotheses. Further the conceptual framework is illustrated, along with the scope of the study, the significance, justification and the operational definitions.

1.2 Background of the Study

1.2.1 Historical background

World over, the post-period of 2009 was witnessed to have paved a way for the introduction of electronic banking in the world of commercial banking (World Payment Report, 2016). This innovation came as a way of restoring the confidence those customers had in commercial banking after the economic crisis that happened in 1970s and to improve the slow growth in the banking industry (Adrian, 2016). With the introduction of electronic banking, the performance of most commercial banks improved (Madueme, 2010). Therefore, since clients were demanding for increased quality of services, electronic banking came to solve this problem by meeting the quality standards required by clients (Amos, 2015).

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In African countries, electronic banking became very common from around 2007. Standard Chartered Bank became the first bank to install Automated Teller Machines (ATMs) in Africa (Abdul, 2007). According to Elliot Mwebya as reported by (Ssettumba, 2004) a payment system in which the transfer of funds is done electronically was introduced in Bank of Uganda in 2004. According to their website, electronic banking in Centenary Bank, was introduced in 2007 though it was restricted to people with basic knowledge of computer operations and the Internet. This was because of the technical difficulties and connectivity problems, proxy websites, and security problems such as the problem of electronic bank fraud.

1.2.2 Theoretical background

This study was guided by the theory of social construction of technology. This theory was advanced by Collins, Pinch and Pickering. This theory is based on four main assumptions.

First, the theory assumes that any technological innovation must have an interpretive flexibility if customer satisfaction is to be achieved (Kim, 2016). Kim (2016) postulates that the designing of technology in an organization has the potential to provide a number of outcomes depending on how the society being served perceives it. They further argue that there is a need for technologies to be rooted from intergroup negotiations over the interpretation of observations if future customer satisfaction is to be enhanced.

The second assumption is that any new technological innovation must be relevant to the targeted social group (Ombati, 2010). This is because targeted or relevant social groups are the embodiments of particular interpretations, thus, multiple groups usually tend to possess differing definitions of any technology designed and introduced (Kim, 2016). Thus, the introduction of new technological development requires to be implemented until when all parties concerned have reached a consensus (Amendu, 2015). Kim (2016) argue that technological determinism is a myth that results when one looks backwards and believes that the path taken to the present was the only possible path.

The third assumption of the theory is related to 'closure' and 'stability'. (Ombati, et al., 2010) agitates that multiple groups of people must be involved in the continuous designing of new technology to avoid conflicting images and this needs to continue until when all conflicts are resolved and the differing definitions are conceded to avoid problems in perception.

The last assumption under which the theory is built is wider context. According to (Ombati et al., 2010), the new technological advancement must be welcomed and fully integrated in the comprehensive social, cultural and political grounds in which artifacts are developed. This will completely make it a success and its goals will be realized widely.

In this study therefore, it was presupposed that if e-banking is to be adopted in commercial banks, there was need to ensure that all customers have the same interpretive flexibility, relevant to all of them, all targeted customers were involved in the design and it was fully welcomed by the entire community, if performance is to be achieved. This thus forms the research assumption that E-fund transfer and telephone banking can have an effect on performance (Madueme, 2010). Much as the assumption stands, there was need to establish whether there is a relationship between e-banking and performance of commercial banks in Uganda using a case study of Centenary Bank.

1.2.3 Conceptual background

Basing on the above historical background, this study aimed at assessing whether the adoption of e-banking had improved the performance of Centenary Bank Uganda. The study was oriented on two main variables; that is, electronic banking and performance.

Electronic banking means the process of undertaking banking while using any electronic device and in most cases while using an electronic phone (Anyasi, 2009). This study therefore conceptualized electronic banking to mean the establishment of electronic funds transfer and telephone banking in Centenary Bank.

On the other hand, performance means achievement of required profit, liquidity and increased asset building in an organization (Omos, 2015). (Ilona, 2013) further looks at performance to mean the ability to perform profitably, efficiently and effectively. This study intended to measure performance with the parameters of effectiveness, efficiency, customer satisfaction and increased market share.

1.2.4 Contextual background

The study context was commercial banks in Uganda with specific focus on Centenary bank. Centenary bank is one of the largest commercial banks in Uganda standing number three in the ranking in the banking industry (CorporateFinanceInstitute, 2015-2019). It was established was founded in 1983 and was registered as a full-service commercial bank in 1993 to support the development of the lives of local Ugandan.

In order to stabilize its position in the banking industry Centenary bank introduced advanced strategies of service delivery which included the introduction of electronic banking in 2003 (Dumba, 2014) though it was restricted to people with basic knowledge of computer operations and the Internet. This was because of the technical difficulties and connectivity problems, proxy websites, and security problems such as the problem of electronic bank fraud.

Despite the introduction of e-banking, Centenary bank has continued registering challenges in its performance over the years like the loss of over UGX 4 Billion shillings from its very managers who were reported to have, who swindled customer money using ATMs (CentenaryBankAnnualReport., 2016) and the reported embezzlement of over UGX 800 million shillings by fraudsters who acquired customers' PIN codes (Kasi, 2018) and (NewVision, 2015). This gave a rationale to carry out this study and establish whether with the dangers that Centenary bank Uganda was exposed to, it still manages to perform.

1.3 Statement of the problem

Over the years, the banking sector world over registered a rapid establishment of commercial banks (World Bank report, 2017). In Uganda in a total of 24 commercial banks were registered over the last 10 years (BOU report 2018). This rapid emergence of commercial banks resulted into stiff competition posing a central challenge on the performance that forced the exit of several banks such as Crane bank from the market. In order to manage the competition, commercial banks like Centenary bank resorted to adoption of several strategies among which was electronic banking. Centenary Bank was among the first banks to adopt e-banking in form of electronic funds transfer, telephone billing systems and internet supported banking with a view of improving its financial performance (Dumba, 2014). Despite the introduction of e-banking, the banks performance was still below the threshold projected in its 2018 strategic plan. For instance, according to Centenary Bank Annual Report (2018), the bank registered a drop on net profit by 8.8% in the year 2017 (Mpumbani, 2018). Whereas the bank made a net profit of Shillings 100.3bn after tax in 2017, this was lower than the 109.9bn in 2016. In addition, the bank also registered an increase in total expenses by 19.5% against the income growth of 11% (Mpumbani, 2018). This study therefore sought to investigate the relationship between electronic banking and financial performance in the context of commercial banks with specific focus on Centenary Bank.

1.4 Purpose of the Study

This general purpose of this study was to establish the relationship between electronic banking and performance of Commercial Banks in Uganda.

1.5 Objectives of the Study

i) To establish the relationship between Electronic funds, transfer and the performance of Centenary Bank.

ii) To examine the relationship between telephone banking and the performance of Centenary Bank.

iii) To assess whether there is a relationship between internet banking and the performance of Centenary Bank.

1.6 Hypotheses

H1: There is no significant relationship between Electronic fund transfer and performance of Centenary Bank.

H2: There is no significant relationship between Telephone banking and performance of Centenary Bank.

H3: There is no significant relationship between Internet banking and performance of Centenary Bank Uganda.

1.7 Scope of the Study

1.7.1 Content Scope

Electronic banking in this study had dimensions of E-fund transfer, telephone banking and internet banking while performance was limited to efficiency, effectiveness, customer satisfaction and increased market share.

1.7.2 Geographical Scope

The study was conducted in Centenary Bank Main Branch (Mapeera House) in Kampala, Kampala central region in Uganda.

1.7.3 Time Scope

The study focused on the period 2016 to 2018 because this is the period when the performance of Centenary Bank was below the projected performance (Centenary Bank annual report and financial statement, 2017).

1.8 Significance of the study

The study findings are expected to benefit readers as far as understanding the relationship between electronic banking and the performance at Centenary Bank. The bank may understand how it can solve the risks associated with electronic banking in order to improve its performance. They may also understand whether there is a need to align the new banking strategies especially E-banking into the needs of its customers as stipulated by theory of social construction of technology.

Secondly, this study may benefit other scholars to gain more knowledge which they can integrate into their future studies related to E-banking in trying to understand its associated effect on the performance of commercial banks. Prior studies by (Asia, 2015) on electronic banking and performance of commercial banks were not about Centenary Bank and therefore this study will help to bridge this gap with consideration of Centenary bank which is one of the fastest growing bank in Uganda today.

1.9 Conceptual Framework

This is a diagrammatic representation of the linkages among the variables of study. This framework shows the conceptualized relationship between the electronic banking as independent variable and financial performance as a dependent variable under this study.

Figure 1: Conceptual Framework

ELECTRONIC BANKING (IV)   **PERFORMANCE (DV)**

E-funds transfer system
• Presence of credit and debit card
• 24-hour operation/ATMs
Telephone banking
• Payment of bills
• Checking of account balance
Online banking
• Email banking
• Prepaid cards

• Efficiency
• Effectiveness
• Customer satisfaction
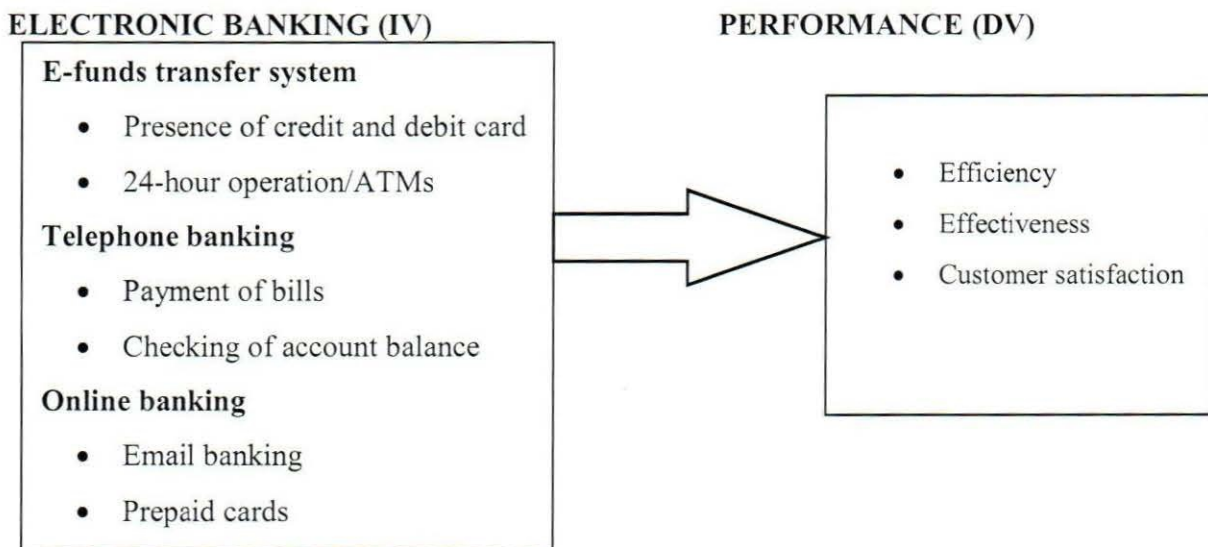
Source: Adapted from Malden and Jayasena (2009)

From the conceptual framework in Figure 1.2, it is hypothesized that e-banking has a relationship with performance. If the financial institution puts in place E-fund transfer, telephone banking and internet banking, this can influence its performance in terms of efficiency, effectiveness and customer satisfaction.

1.10 Operational Definitions of Terms

E-fund transfer: means the presence of infrastructure that can stimulate the usage of electronic banking and these include; 24-hour operational ATM machines, credit and debit card systems

Telephone billing system: refers to the adoption of telephones services in paying, checking accounting and transferring money from one account or bank to the other in Centenary bank

Customer satisfaction: refers to an indication of how electronic banking has helped in meeting the customers' expectation.

Efficiency: refers to whether with introduction of e-banking, Centenary bank is performing in the best possible manner with the least waste of time and effort.

Effectiveness: refers to whether the e-banking system has adequately enabled centenary bank improve their performance by avoiding long queues in the bank, attracting new customers and thereby realizing more profits.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of related literature to the study. The review was conceptualized under the objectives of the study and focuses primarily on E-fund transfer, online banking and telephone banking and their relationship with performance. These are considered as the pillars of this study.

2.2 Theoretical review

The theoretical framework for this study was derived from the theory of social construction of technology. First, the theory assumes that any technological innovation must have an interpretive flexibility if customer satisfaction is to be achieved (Kim, 2016). Kim (2016) postulates that the designing of technology in an organization has the potential to provide a number of outcomes depending on how the society being served perceives it. They further argue that there is a need for technologies to be rooted from intergroup negotiations over the interpretation of observations if future customer satisfaction is to be enhanced.

The second assumption is that any new technological innovation must be relevant to the targeted social group (Ombati, 2010). This is because targeted or relevant social groups are the embodiments of particular interpretations, thus, multiple groups usually tend to possess differing definitions of any technology designed and introduced (Kim, 2016). Thus, the introduction of new technological development requires to be implemented until when all parties concerned have reached a consensus (Amendu, 2015). Kim (2016) argue that technological determinism is a myth that results when one looks backwards and believes that the path taken to the present was the only possible path.

The third assumption of the theory is related to 'closure' and 'stability'. (Ombati, et al., 2010) agitates that multiple groups of people must be involved in the continuous designing of new technology to avoid conflicting images and this needs to continue until when all conflicts are resolved and the differing definitions are conceded to avoid problems in perception.

The last assumption under which the theory is built is wider context. According to (Ombati et al., 2010), the new technological advancement must be welcomed and fully integrated in the comprehensive social, cultural and political grounds in which artifacts are developed. This will completely make it a success and its goals will be realized widely.

In this study therefore, it was presupposed that if e-banking is to be adopted in commercial banks, there was need to ensure that all customers have the same interpretive flexibility, relevant to all of them, all targeted customers were involved in the design and it was fully welcomed by the entire community, if performance is to be achieved. This thus forms the research assumption that E-fund transfer and telephone banking can have an effect on performance (Madueme, 2010). Much as the assumption stands, there was need to establish whether there is a relationship between e-banking and performance of commercial banks in Uganda using a case study of Centenary Bank.

Ombati et al., (2010) while borrowing from the quality trilogy theory, assumed that the social construction theory of technology can be used to guide this study especially customer satisfaction. The theory predisposes that satisfaction of customers' means that a product or service must meet customer needs which in turn translated into customer satisfaction. Ombati et al., (2010) took a holistic approach to quality and their concept of quality revolved around what is called a quality trilogy. According to them, quality must consist of three things which an organization can focus on to achieve customer satisfaction and retention. First, the organization must invest in planning. During the planning phase the company needs to find

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out the customer needs and come up with goods and services to meet these needs. Second, the organization needs to be mindful of quality control. This is aimed at ensuring that the goods and services that are consumed always meet a uniform standard and that quality can always be measured. Here, you want to make sure that the organization clearly define what quality is for each product and develop a way to effectively compare the goods produced against the quality standard. In other words, it is comparing actual performance against the quality goals. Third, the organization must put mechanisms in place to allow for constant improvement in quality. According to (Ombati et al, 2013), quality achievement is a continuous process and quality should keep improving. The organization needs to continuously monitor production and look out for areas in the production process that need to be improved.

For purposes of this study, this theory directly pointed out that if an organization like Centenary Bank adhered to customer pre requisites by putting in place quality planning (more so like top management as adopted in this study), quality control (more so like customer focus adopted in this study) and quality improvement (more so like continuous improvement, and employee involvement as adopted in this study), these could lead to increased customer satisfaction in terms of increasing timeliness in customer services, quality improvement and reduced costs in an organization.

2.3 Conceptual review

This provides a review of related literatures of the previous scholars in contention with determining the relationship between E-banking and performance of commercial banks. For this study, E-banking is an independent variable and is conceptualized by; Electronic fund transfer, telephone banking and internet banking. Performance is a dependent variable and is conceptualized as efficiency, effectiveness, customer satisfaction.

2.3.1 E-fund transfer and performance

The relationship between e-funds transfer and performance of commercial banks has been reflected in a number of studies. For instance, in a study conducted in Rwanda (Jean, 2018) in relation to the influence of ATMs on financial performance of commercial banks. The study was conducted while using a cross sectional design covering three selected commercial banks. Data was analyzed using Pearson correlation ad it was established that the introduction of 24hour ATMs in the three selected banks in the study had positively and significantly influenced the financial performance of commercial banks. They established that this is because ATMs had expanded the business of banking to areas far away from town to rural based banking. People in villages could easily access their finances without delays. The major gap identified in this study lies in the fact that it was done in Rwanda. It ignores what is taking place in Uganda. Therefore, there was a need to undertake this study to fill this gap while establishing what is happening in Uganda while using centenary bank.

In another related study, (Stephanie, 2015) undertook a study while investigating the relationship between installed ATMs on performance of commercial banks in Kenya. The study was conducted while using a cross sectional design using a sample of 76 corporate customers. Data was collected by use of a questionnaire and it was analyzed by use of spearman correlation. The study found out that the introduction of ATM in Kenya e-banking had significantly improved on its performance in both finances and customer satisfaction. There was thus a need to undertake a similar study in Centenary Bank to find out whether this is the same case for Centenary bank in Uganda.

Further, in a study done by (Dundore, 2017) and (Nganyanyuka, 2017) investigating the impact of credit and debit card as e-fund transfer systems on financial performance of commercial banks in Tanzania. The study was conducted as exploratory study using a qualitative approach. Data was collected through an interview guide and a documentary review checklist. Data was

analyzed while using thematic and content analysis. The study found out that the introduction of credit and debit card had changed the financial performance of commercial banks in Tanzania. This was attributed to the fact that credit and debit card had widened the extent to which customers used their funds than before. This in the long run had improved on perceived profitability, efficiency and effectiveness of these commercial banks. This current study has been conducted using both the qualitative and quantitative approach.

(Stoner, 2011) describes ATMs a machine run by a computer and contains customer databases and a vault. To access money, the customer enters a plastic card containing a PIN. ATMs are mainly located outside the banks and they provide a wide range of services and they were mainly introduced to dispense cash to clients but with the advent of technology, ATMs are now able to offer account balance viewing services and even pay bills. Banks use this electronic banking devices, to gain competitive advantage. The combination of automation and human tellers gives more productivity for the bank during banking hours.

In a related study, (Otienno, 2011) investigated the relationship between expectations, performance and satisfaction. The findings revealed that when a customer judges the performance of a product, he usually compares a set of performance outcomes that are expected. The product is then likely to be considered as dissatisfactory or satisfactory. Similarly, (Omos, 2015) examined the antecedents and outcome of firms' customer satisfaction and found that quality falling short of expectations have higher impact on satisfaction and retention compared to those exceeding expectations. They also revealed that satisfaction positively affects repurchase intentions and both positive and negative disconfirmations increase with the ease of quality evaluation. (Snehalkumar, 2013) carried out a study in the India to find out the level of customer satisfaction. The study involved asking customers various questions concerning the level of satisfaction with their banks. The study revealed that most customers considered attributes such as courtesy, quick turnaround and professionalism

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as resulting into customer satisfaction. Moreover, the findings also revealed that the provision of good, personal service is considered by the clients as more important more than convenience or products.

(Bashir, 2018) discusses the emerging trend and importance of debit card in daily lives of Indian society. Debit cards are mainly used in instances where there are many cash and cheque transactions like supermarkets, petrol stations and convenience stores. These cards are meant for customers that prefer paying using plastic card but without credit. These cards help to keep the cardholder debt free but as well provide detailed account on spending. There cards are designed for customers who like paying by plastic card but do not want credit. These cards not only keep the cardholder debt free but also provide a detailed account of spending. (Amedu, 2015) showed that the debit cards were more widely used than credit cards because of assurance of payments to retailers. The study showed that the growth of service industry in the country, increased use of e-banking services which enabled the banks to cut down on costs associated with paper based clearing and payments. All these studies were however conducted in different regions and banks hence the need to conduct one in Centenary Bank.

2.3.2 Telephone banking and performance

The relationship between telephone banking and performance of commercial banks has been reflected in a number of studies. For instance, from the study done (Ahmad, 2017) while investigating the role of telephone banking systems on financial performance. The study was conducted while using a cross sectional design covering three selected commercial banks. The study collected data using questionnaires and the data was analyzed using Pearson correlation. In the study it was ascertained that since telephone banking provides a facility that can allow customers to access their bank accounts wherever they can be. Customers only dial and dial and press buttons or make calls and easily have their money at their disposal. Telephone banking has made it easy for clients to have access to their information just by pressing a button

of inquiry. (Ananth S. a., 2016) add that telephone banking allows phones to access their computers and identify the users authentically. The codes are easily replied too and allow convenience in banking and accessing finance among the customers (Ahmad, 2017). This was however done outside Africa.

(Amedu, 2015) undertook a study on the impact of telephone banking on customer satisfaction in Mozambique Banking industry. The study was conducted using a case study design covering Diamond and Three Star commercial banks in the country. The study collected data using questionnaires. Data was analyzed while using Pearson correlation. They ascertained that telephone banking is too important in transforming the banking industry especially when it comes to attracting a big number of following. It was established that in the five years, this kind of digital or digital money transfer has been in place; over 22% of citizens had been included on banking rotation in the country. Majority of these people were rural dwellers who are engaged in agriculture and grazing including those in small businesses. It was established that there was clear positive word of mouth concerning with one customer recommending others. Banks and telecom companies increased their subscribers and clients by 17% in the space of five years. This shows how significant telephone banking was and has been on the improving customer satisfaction in Mozambique. This why I undertook this study to establish whether it is the same situation for Centenary bank, Uganda.

In another related study by (Al-Ashban, 2012) undertook a study to investigate the influence of money transfers using cell phones to performance of commercial banks in Saudi Arabia. The study was conducted using a cross sectional design with a sample of 76 corporate customers. Data was collected using questionnaires and it was analyzed using spearman correlation. The study found out that money transfers by using cell phones had significantly improved the performance of commercial banks in both finances and customer satisfaction. Since this study was done in Indonesia, there was need for a study like this to be undertaken in Centenary Bank

to find out whether what was found out in Saudi Arabia banking industry is related to what is in centenary bank in Uganda.

2.3.3 Internet banking and performance

In order to try to understand the relationship between internet banking and performance of commercial banks, several studies have been reviewed. (Ananth S. a., 2016) undertook a meta-analysis study to ascertain the relationship between internet banking and bank fraud in commercial banks in Liberia. The study collected data using questionnaires. Customers and banking officials were used in data collection who were chosen using purposive sampling. Data was analyzed while using Pearson correlation. The study found out that internet banking had moderately contributed to ongoing bank fraud. They argued that internet banking provides convenience on the side of the customers because it allows customers to access their accounts in their houses, offices and parties. It reduces levels of insecurity involved in impersonation.

However, they found out that internet banking came with both advantages and disadvantages. One of the main disadvantage is precipitating criminal activates like fraud, mishandling of accounts, increased spending of funds on the side of customers, financial insecurity and easy to access to finances whenever one wants to spend. They added that internet banking is one of easiest ways of transferring money. They believe that the relationship between customers and their banks increases, minimizes chances of errors, makes it easy on the side of the bank to market their new products to their customers while using internet based messages that are instantly read by clients. With the introduction of internet banking, the profitability of most commercial banks was seen going high and high. There was thus a need for a study like this to be undertaken in Centenary Bank to find out whether what was found out Liberian banking industry is related to what is in centenary bank in Uganda.

Further, in a study done by (Agwu E. a.-l., 2018) in Nigeria assessing the relationship between internet banking, customer satisfaction and performance of commercial banks in Lagos. The study was conducted as a case study research while triangulating both qualitative and quantitative designs. The study collected data using questionnaires and interview guide. Customers and banking officials were used in data collection who were chosen using purposive sampling. Data was analyzed while using both descriptive and inferential statistics. (Agwu E. a.-l., 2018) discovered that internet banking has been on a forefront of measures that is being advised to a number of commercial banks to improve their customer satisfaction because of its importance in safeguarding information and required privacy. However, on contrary, they found out that the introduction of internet banking did not necessarily improve customer satisfaction as it is indicated but rather it had increased on complains of insecurity which in many ways affected the financial performance of Nigerian banking industry.

The above findings concur with the study done by Omero (2014) in one of his studies in this area found out that at the initial stages of internet banking, a big majority of customers applied for it but after three years, over 23% of the customers had pulled out arguing that internet banking supported fraud and impersonation. A number of customers indicated cases of losing money to impersonators and others stole money in the name of friends. Agwu et. Al. (2018) added that the survey also identified issues to do with networking. The loss of network and ignorance of a big number of customers made them think that internet banking was-not deserving. It was thus concluded that internet banking had not favourably improved customer satisfaction in some cases especially when it comes to networking and increasing number of fraudsters sending disguised information in the name of others. The only gap evident in the study is time and geography. The study was conducted a year back and was done in Nigeria. This renders this study old and calls for a new study like this in Centenary Bank to find out

whether what was found out Nigerian banking industry is related to what is in Centenary Bank in Uganda.

2.4 Summary and Literature gap

The literature reviewed seemed to have been done in years before 2019 indicating that electronic banking has an effect on financial performance in commercial banks. However, there was no specific study which had done for the last five years on how electronic banking effects on customer satisfaction at Centenary Bank Uganda, therefore, this study aimed at getting empirical evidence regarding the relationship between the two variables in the study. The next chapter, thus, provides the methodology that was used to get this empirical evidence.

Some of the related studies were conducted in different areas which lacked the empirical truth of what is happening in Uganda. Relatively little scholarly research had explored the relationship between electronic banking systems and performance of commercial banks in a developing country like Uganda and therefore sought to fill the knowledge gap in this area.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter consists of the design that was required to undertake this research, sampling of the respondents, collecting the data, establishing the validity and reliability of the tools and analyzing of the data that was collected.

3.2 Research Design

The study adopted a case study research design which is descriptive in nature since it is favorable for an in-depth study of an organization (Creswell, 2014). In this study, descriptive design was adopted because it was suitable for describing the observable relationship between electronic banking and financial performance at Centenary Bank. The study was quantitative and qualitative in nature. Quantitative methods were used to quantify data for purposes of describing current conditions while investigating the relationship between the two study variables. The study also adopted a qualitative approach to ascertain the in-depth information for the study variables while balancing opinions from a number of respondents (Amin, 2005).

3.3 Study Population

Centenary Bank has several branches all over Uganda employing a total number of 2638 employees. However, for this study the targeted population was 195 employees who work at the Centenary Bank Main headquarters as per the HRM employee Records of 2019.

3.4 Determination of the Sample Size

To achieve the objective of this study, the sample size of 161 respondents were used with the help of the Morgan and Krejcie table (Amin, 2005). The sample size comprised of employees from different departments as seen in the table below.

Table 1: Sample Size of Respondents and Sampling Technique

Category of Population	Population Size	Sample Size	Sampling Technique
Administrative staffs	10	10	Census sampling
Central Bank Management officials	8	8	Census sampling
IT staff	7	7	Census sampling
Customers	78	63	Snowball sampling
Bank lower officials	92	73	Simple Random sampling
Total	**195**	**161**	

Source: primary data ((2019)

3.5 Sampling Techniques

This study employed snowball sampling technique to choose a sample of customers with a particular focus on customers of centenary bank in Kampala. This was chosen because much as the customers are geographically scattered, there was need to give them equal chance to participate in the study (Rowland, 2001). Simple random sampling was used in selecting bank lower officials in order to reduce the selection bias. The purposive sampling technique was used in choosing administrative staff, Centenary Bank Management officials, and IT staff. This technique was used because it was important in choosing people who are knowledgeable about electronic banking and performance of Centenary bank (Sekaran, 2003).

3.6 Data Collection Methods

Data was gathered from both primary and secondary sources. Primary data was gathered using self-administered questionnaires and interviews (Gill, 2008). While secondary data was obtained from review of documents such as journals, reports, planning documents, memos, and files. I collected the data with assistance from the research assistants for convenience and speed.

3.6.1 Questionnaire method

The study employed this method to collect original data from the bank officials and the customers. These were designed with close ended questions which allowed easy recording of responses, coding and analysis of the data to achieve the study objective (Amin, 2005). The questionnaire had five different sections where section A captured the Bio-data of the respondents. Section B-E captured statement to which the respondents were required to tick the extent to which they agree to the statements following a 5 Likert scale. Section B comprised of statements on E-fund transfer. Section C captured statements on telephone banking, section D comprised statements on Internet banking and section E captured statements ascertaining the performance of Centenary bank.

3.6.2 Interview

The study employed structured key informant interviews to obtain more information on electronic banking and performance from administrative staff, Central Bank officials, IT staff and customers. This method helped in clearly obtaining in-depth answers or information from key informants in answering all the three objectives for the study (Creswell, 2014).

3.6.3 Documentary Review

The secondary data collection was guided by a documentary review checklist. The documents to be reviewed in this study included; Centenary Bank Annual Reports, the Strategic Plans,

Financial statements, Bank of Uganda Annual Reports and many others in order to obtain information that was related to the study. This method was used because it enables the researcher to find data at his appropriate time (Oso, 2008).

3.7 Quality control

Data quality in this study was ensured by testing the data collection tools and instruments for relevance and consistence. The section therefore presents how validity and reliability were done as indicated below.

3.7.1 Validity

The validity of study instruments was established using expert judgments (Oso, 2008). The experts included the academic supervisors and work colleagues. Three to five experts were contacted to assess and evaluate the validity of the instruments. The experts were requested to rate questions depending on their relevance. The Content Validity Index (C.V.I) was determined by dividing the number of items rated relevant and total number of items as stated in the following formula (Denise, 2006).

$$CVI = \frac{\text{No. of Items rated as relevant}}{\text{All items in the questionnaire}}$$

Table 2: Content Validity Indices for the Questionnaire

Variable	Description	No. of Items	Content validity index
Independent	E-funds transfer	12	.887
	Telephone banking	12	.845
	Internet banking	12	.934
Dependent	Performance	18	.899

Source: Primary data

Since all items scored a CVI above 0.7, it was clear that they were eligible to be used in the questionnaire to collect data since they would serve the intended purpose.

3.7.2 Reliability

In establishing the reliability of the tools, the study instruments were pretested twice. Two pilot studies were conducted in Equity Bank Limited Uganda. The first and second tests were conducted in the range of two weeks and the results obtained from each test showed consistency, indicating that it had passed the reliability test. A Cronbach's Alpha Reliability Coefficient of 0.7 and above was considered applicable (Oso, 2008). The results from the pretest were used to modify the items in the instruments. Upon performing the test, the results that were 0.7 and above were considered reliable.

Table 3 :Reliability indices for the respective sections of the questionnaire

Variable	Description	No. of Items	Cronbach alpha
Independent	E-funds transfer	12	.833
	Telephone banking	12	.844
	Internet banking	12	.788
Dependent	Performance	18	.801

Source: Primary data

Since all items scored a Cronbach Alpha Coefficient above 0.7, it is clear that they were eligible to be used in the questionnaire to collect data since they showed consistency.

3.8 Data Analysis

3.8.1Quantitative data analysis

The Quantitative data was analyzed using SPSS version 21. This was used to derive descriptive and inferential statistics. Descriptive statistics used in this study included frequencies,

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percentages, means and standard deviation. Descriptive techniques were used to establish the numerical strength of the study variables. Inferential statistics used in this study included correlations, that is, Pearson correlation and Regression which were conducted using linear regression. Pearson correlation was used to establish the relationship between two variables in order to answer the research hypotheses. Linear regression was used to establish the relationship between more than two variables, that is, electronic banking constructs and performance of Centenary bank.

3.8.2 Qualitative data analysis

When undertaking qualitative analysis, the researcher takes time to identify all important findings, categorize them, pattern them and relate the data (Gabriel, 2011).

Qualitative data from interviews were classified in terms of themes, which were sorted out and categorized accordingly; simple content categories, themes and sub-themes, were closely examined and compared for similarities and differences (Oso, 2008).

For this particular study, thematic analysis was used in analyzing qualitative data. (Gill, 2008) argue that thematic analysis was favorable in identifying, analyzing and reporting data pattern. In this study, qualitative data was analyzed in themes according to the objectives of the study using intrusion and interpretation and the findings were presented in a narrative form (Gabriel, 2011).

3.9. Measurement of Variables

The following mean intervals and their interpretations were used to electronic banking and performance.

Table 4: Showing the Interpretation of Rating Scale on electronic banking

Rating Scale	Scale interpretation	Legend scale	Scale interpretation
4.21-5.00	Strongly Agree	4.21-5.00	Very effective
3.41-4.20	Agree	3.41-4.20	Effective
2.61-3.40	Uncertain	2.61-3.40	Moderate
1.81-2.60	Disagree	1.81-2.60	Ineffective
1.00-1.80	Strongly Disagree	1.00-1.80	Very ineffective

Table 5: Showing the Interpretation of Rating Scale on Performance

Rating Scale	Scale interpretation	Legend scale	Scale interpretation
4.21-5.00	Strongly Agree	4.21-5.00	Very high
3.41-4.20	Agree	3.41-4.20	High
2.61-3.40	Uncertain	2.61-3.40	Moderate
1.81-2.60	Disagree	1.81-2.60	Low
1.00-1.80	Strongly Disagree	1.00-1.80	Very low

3.10 Ethical considerations

The respondents were assured of complete confidentiality to the extent that none of their individual cases would be reported in a way that could be traced back to the them in this study. I also made an effort to adhere to ethical standards by obtaining permission to conduct the study from both Kyambogo University and the management of the Centenary Bank in Uganda before carrying out any data collection as indicated in their book Research Ethics for Social Scientists (Mark, 2006). (Creswell, 2014) stipulated that a critical issue in every research is that the participants should be granted informed consent before they participate in the study so before

the research, I clarified to the respondents the nature of the research and that their participation was voluntary and based on informed consent and they were informed of the right to withdraw from the study at any point, if they desired.

3.11 Limitation/Delimitations of the study

In order to limit the error due to the respondents' honesty, personal bias and uncontrolled setting I tried to explain the purpose of the study and requested the respondents to be as honest and unbiased as possible. Validity and reliability tests were also done to address the issue of research instruments that could have not been able to produce credible measurement of the research variables. And in order to minimize inconsistencies brought about by the use of untrained research assistants, a detailed orientation and briefing of the research assistants was done before they were deployed for data collection.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND DISCUSSION OF DATA

4.0 Introduction

This chapter presents and analyses the data collected from the field. The chapter starts with the profile of the respondents, this is followed by the findings on the E-funds transfer, then the findings on the telephone banking, then findings on internet banking, then the findings on performance of Centenary Bank, and then the findings on the relationships between the independent variables and the dependent variables.

4.1 Response rate

Table 6: Showing the response rate

Respondents	Sample size	Frequency	Percentage
Administrative staffs	10	5	50%
Central Bank Management officials	8	5	62.5%
IT staff	7	5	71.4%
Customers	63	59	93.7%
Bank lower officials	73	61	83.6%
Total	**161**	**135**	**83.9%**

Source: Primary data

It is evident that the study was done basing on a response of above 70% which is recommended by (Amin, 2005). In this study, the response rate was measured at 83.9%. This means that from the 161 respondents that had been targeted, 135 respondents participated in the study.

4.2 Demographic Characteristics of Respondents

The profile of the respondents focused on the gender, age group, education, duration at the bank and the current position of both banking officials and customers in Centenary bank. The details are indicated in Table 7 and 8 below.

Table 7: Demographic characteristics of the respondents (Banking officials)

N=66

Characteristics	Category	Frequency	Percentage
Gender	Male	42	63.6%
	Female	24	32.4%
Age	20-29 years	7	10.6%
	30-39 years	28	42.4%
	40-49years	19	28.8%
	Above 50 years	12	18.2%
Education Level	Bachelor's Degree	32	48.9%
	Post Graduate Diploma	12	18.2%
	Master's Degree	12	18.2%
	Professional Qualification	10	15.2%
Duration at Centenary bank	Below 2years	2	3%
	2-5 years	11	16.7%
	6-10 years	25	37.9%
	11-15years	28	42.4%
Current position	Branch manager	1	1.5%
	Operations manager	2	3%
	Supervisor	21	31.8%
	Credit officer	8	12.1%
	Banking officer	34	51.5%

Source: Primary Data

According to the results in Table 7 above, more than half 63.6% of the study respondents were male and 32.4% were female. This shows that the study obtained data from both male and

female banking officials. This therefore implies that the study findings can be generalized to both male and female officials in Centenary Bank.

As clearly indicated in Table 7, the biggest proportion 42.4% of the study respondents were aged between 30-39years of age, followed by 28.8% who were between 40-49 years of age. 18.2% of respondents were aged above 50 years. Only 10.6% were aged between 20 and 29 years of age. This means that data was collected from banking officials from the different categories at the bank. This therefore implies that the study findings can be generalized to all staff in the different age categories at Centenary Bank.

The findings in Table 7 indicate that most (48.9%) of the study respondents were educated up to Bachelor's Degree level, followed by 18.2% who were educated up to master's degree level and postgraduate diploma level and 15.2% had professional qualification. This shows that data was attained from banking officials in the different education categories and therefore the views of banking officials from the different education categories in the Centenary Bank were well represented in the study.

According to the results in Table 7 above, 42.4% of the study respondents had worked for the Centenary Bank for a period of 11-15 years, followed by 37.9% who had worked for a period of between 6-10 years, 16.7% had worked for the bank for the last 2-5years and 3% had worked with the Centenary Bank for less than two years. This shows that data were obtained from banking officials across the different levels of experience. This implies that the views of the banking officials from the different experience levels were well represented in the study besides having the most experienced and therefore more knowledgeable as the majority respondents.

It is also noted that the majority of respondents engaged in the study were on the level of banking officer that constituted 51.5%, Supervisors constituted 31.8% and Credit officers constituted 12.1%. The Operational manager constituted only 3% and the Branch managers

constituted 1.5%. This means that the study obtained data from different statuses which makes it representative.

Table 8: Demographic characteristics of the respondents (Customers)

N=59

Characteristics	Category	Frequency	Percentage
Gender	Male	37	62.7%
	Female	22	37.3%
Age	20-29 years	11	18.6%
	30-39 years	20	34%
	40-49years	20	34%
	Above 50 years	8	13.6%
Education Level	Diploma	8	13.6%
	Degree	33	56%
	Masters	18	30.5%
Duration at Centenary bank	Below 2years	4	6.8%
	2-5 years	9	15.2%
	6-10 years	13	22%
	11-15years	23	39%
	15years ++	12	20.3%

Source: Primary Data

According to the details in Table 8 above, more than half 62.7% of the study respondents were male and 37.3% were female. This shows that the study obtained data from both male and female customers. This therefore implies that the study findings can be generalized to both male and female customers in Centenary Bank.

As clearly indicated in Table 8, the biggest proportion 34% of the study respondents were aged between 30-39years and 40-49years of age each, followed by 18.6% who were between 20-29 years of age. 13.6% of respondents were aged above 50 years. This means that data were collected from customers in the different categories at the bank. This therefore implies that the study findings can be generalized to all customers in the different age categories at Centenary Bank.

The findings in Table 8 indicate that the most 56% of the study respondents were educated up to Bachelor's Degree level, followed by 305% who were educated up to master's degree level, and lastly by 13.6%had a diploma. This shows that data was attained from customers in the different education categories. This implies that the views of customers from the different education categories in the Centenary Bank were well represented in the study.

According to the results in Table 8 above, 39% of the study respondents had been banking with Centenary Bank for a period of 11-15 years, followed by 22% who had been banking for a period of between 6-10 years, 20.3% had at the bank for the last 15 years and above, 15.2% had been banking with centenary bank for 2-5 years and only 6.8% has been with the Centenary Bank for less than two years. This shows that data were obtained from customers across the different levels of experience. This implies that the views of the customers from the different experience levels were well represented in the study. Besides, experienced customers were assumed to have more knowledge on the subject under study, thus they could be relied on to provide credible information.

4.3 Electronic Banking in Centenary Bank

This study first determined the effectiveness of electronic banking systems before responding to the research objectives. Electronic banking systems in the bank were examined through E-funds transfer, telephone banking and internet banking. To ascertain the findings and give

interpretations, mean ranges and standard deviations were employed. Mean ranges from 1.00-1.79 indicated that majority of the respondents strongly disagreed with the items investigated under electronic banking systems, thus, the electronic banking systems in Centenary Bank are very ineffective; mean ranges from 1.80-2.59 show that majority of the respondents disagreed with the items investigated under electronic banking systems, thus, the electronic banking systems in Centenary Bank are ineffective; mean ranges from 2.60-3.39 indicate that majority of the respondents were neutral about the items investigated under electronic banking systems, thus, the electronic banking systems in Centenary Bank are moderate; mean ranges from 3.40-4.19 show that majority of the respondents agreed with the items investigated under electronic banking systems, thus, the electronic banking systems in Centenary Bank are effective; and lastly; mean ranges from 4.20-5.00 portray that majority of the respondents strongly agreed with the items investigated under electronic banking systems, thus, the electronic banking systems in Centenary Bank are very effective. The findings on the electronic banking systems in Centenary Bank are presented in Tables 9, 10, 11,12,13 and 14.

Table 9: Mean Values Showing experiences of bank officials regarding the performance of electronic funds transfer in Centenary bank

	N	Mini mum	Maxi mum	Mean	Std. Deviation	Interpretation
Our e-cheque services are very convenient	66	4	5	4.68	.470	Very effective
Internet costs to access our banking system is affordable	66	2	5	4.24	.762	Very effective
Many of clients have resorted to ATM services instead of lining up	66	1	5	4.25	.814	Very effective
Cases of bank fraud have reduced as a result of ATM	66	1	5	3.87	.987	Effective
Credit card system has attracted many of our clients	66	1	5	3.80	1.087	Effective
We often receive positive feedback from customers about our ATMs	66	1	5	3.74	1.075	Effective
Mean average				**4.01**	**1.03**	**Effective**

Source: Primary Data

The mean average of 4.01 at the standard deviation of 1.03 indicates that the e-funds transfer in Centenary Bank is generally effective. E-funds transfer in centenary bank is effective because majority of the respondents agreed that they often receive positive feedback from customers about ATMs (mean=3.74; Std. dev. =1.075); they also agreed that credit card system has attracted many of clients and actions (mean=3.80; Std. dev. = 1.087); they further agreed that cases of bank fraud have reduced as a result of ATM (mean=3.87; Std. dev. =.987).

In addition, respondents rated some three items under E-funds transfer as very effective as they indicated that many of clients have resorted to ATM services instead of lining up (mean=4.25;

Std. dev. = .814); they also strongly agreed that internet costs to access our banking system is affordable (mean=4.24; Std. dev. =.762) and they also strongly agreed that e-cheque services are very convenient (mean=4.68; Std. dev. = .472).

Table 10: Mean Values showing experiences of customers regarding electronic funds transfer in Centenary bank

	N	Mini mum	Maxi mum	Mean	Std. Deviation	Interpretation
I have my complaints about E-cheque services in centenary bank	59	1	5	3.93	.908	Effective
Internet costs to access my bank account is affordable	59	1	5	3.58	1.008	Effective
ATM makes it easy for me transact with Centenary bank	59	1	5	3.63	.996	Effective
I am able to transfer my money by just a click of button	59	1	5	3.66	1.156	Effective
Centenary Bank credit card services are efficient	59	1	5	3.49	1.186	Effective
Centenary bank visa card services are efficient	59	1	5	2.96	1.256	Moderate
Mean average				**3.65**	**1.33**	**Effective**

Source: Primary Data

The mean average of 3.65 at the standard deviation of 1.33 indicates that the e-funds transfer in Centenary Bank is generally effective. E-funds transfer in centenary bank is effective because majority of the respondents-customers agreed that Centenary Bank credit card services are efficient (mean=3.66; Std. dev. =1.086); they also agreed that they able to transfer their money by just a click of button (mean=3.63; Std. dev. = 1.996); they further agreed that ATM makes it easy for them to transact with Centenary bank (mean=3.87; Std. dev. =.996). In

addition, majority agreed that internet costs to access their bank account is affordable (mean=3.58; Std. dev. = 1.008); and lastly, they agreed that they have complaints about E-cheque services in centenary bank (mean=3.49; Std. dev. =1.186).

In addition, respondents rated one items under E-funds transfer as moderate as indicated that Centenary bank visa card services are efficient (mean=2.96; Std. dev. = 1.256).

One of the key informants or administrative staffs in the bank was quoted saying,

> *"Our ATMs have been one of the most effective in the banking industry in Uganda...for the last three years I have been here...we have never registered any technical issue with them ..."* (Key Informant, 6)

> *"...there are enough arrangements which the bank uses to listen to complaints of customers regarding the efficiency and effectiveness of ATMs...for instance, we have feedback points at ATM machines, we have an office which cater for all disturbances or complaints faced by clients and surveys are always conducted by consultancy firms to identify customer complaints and how best they can be addressed..."* (Key Informant, 1)

However, key informants expressed a different concern with ATMs usage

> *"...the introduction of deposit taking ATMs has made life easy though they have one main complaint regarding the amount of money that can be deposited...since the system does not allow deposits beyond one million shillings at once...it remains ineffective to some clients..."* (Key Informant, 2)

"...the scarcity of Centenary bank ATMs is high...the recent partnership with VIVO energy only favours those who are driving...this means that it only helps a certain class of clients and this highly affects customer satisfaction ..." (Key Informant, 3)

The above findings seemed to tally exactly with the documents reviewed. For instance, in the Bank of Uganda Annual Report (2013) indicated that ATM services has been highly adopted by commercial banks and this had reduced on the time it takes to a person in the bank and improved on efficiency of the service.

In conclusion, ATM services have been adequately utilized in Centenary bank despite a few complaints related to provision of fake notes, challenges associated with deposit taking ATMs and scarcity of ATM facilities. The correlation analysis confirms the extent to which ATM services have improved on customer satisfaction.

Table 11: Mean Values showing experiences of bank officials regarding the performance of telephone banking in Centenary bank

	N	Minimum	Maximum	Mean	Std. Deviation	Interpretation
Many of our clients have welcomed the arrangement of centenary whereby a client can bank his or her money at their homes	66	1	5	4.04	1.170	Effective
I have seen majority of our customers resorting to paying bills using cell phone in centenary bank	66	1	5	4.07	.944	Effective
I have seen majority of customers check their account balance using their phones	66	1	5	3.93	.908	Effective
I have heard no complaints of losses related to transfer money from one bank account to another using their phones	66	1	5	3.52	1.011	Effective
Many of our customers have resorted to withdrawing money using a phone from the bank	66	1	5	3.54	1.032	Effective
Our smart card systems has attracted majority of our clients	66	1	5	3.64	1.197	Effective
Mean average				**3.98**	**0.907**	**Effective**

Source: Primary Data

The mean average of 3.98 at the standard deviation of 0.907 indicates that the telephone banking in Centenary Bank is generally effective. Telephone banking in centenary bank is effective because majority of the respondents agreed that the smart card systems has attracted many clients (mean=3.64; Std. dev. =1.197); they also agreed that many of bank customers

have resorted to withdrawing money using a phone (mean=3.54; Std. dev. = 1.032); they further agreed that they have heard no complaints of losses related to transfer money from one bank account to another using their phones (mean=3.52; Std. dev. =1.011). In addition, they agreed that they have seen majority of customers check their account balance using their phones (mean=3.93; Std. dev. = .908); they further agreed that they have seen majority of our customers resorting to paying bills using cell phone (mean=4.07; Std. dev. =.944) and lastly they agreed that many of their clients have welcomed the arrangement of centenary whereby a client can bank his or her money at their homes (mean=4.04; Std. dev. =1.170). In line with study findings, key informants were quoted saying,

> *"The underlying complaints that has been reported as affecting telephone banking is related with the charges…there is an extra payment of 6% on shopping goods using telephones and this affects usage…"* (Key informant 1)

In addition, key informant 2 said that,

"…telephone banking is still highly limited by network…the unreliability of this network has been forcing a good number of our clients to resort to use of cash instead of debit cards which has largely affected their level of satisfaction …" (Key informant 2)

Table 12: Mean Values showing experiences of customers regarding telephone banking in Centenary bank

	N	Mini mum	Maxi mum	Mean	Std. Deviation	Interpretation
With Centenary Bank, I find it easy to bank my money using a cell-phone at home	59	1	5	3.47	1.081	Effective
I often find it easy to pay bills using my cell phone in centenary bank	59	1	5	3.37	1.216	Effective
I can easily check my account balance using my phone in centenary bank	59	1	5	3.69	1.139	Effective
I can now easily transfer money from my bank account to another using my phone	59	1	5	4.49	.843	Effective
I often find it easy to withdraw money using my phone from the bank account	59	1	5	4.10	.980	Effective
Cente-mobile has been efficient for me	59	1	5	4.40	.828	Effective
Mean average				**3.98**	**1.11**	**Effective**

Source: Primary Data

The mean average of 4.40 at the standard deviation of 1.11 indicates that telephone banking in Centenary Bank is generally effective. Telephone banking in centenary bank is effective because majority of the respondents agreed that Cente-mobile has been efficient for them (mean=4.40; Std. dev. =.828); they also agreed that they often find it easy to withdraw money using their phones from the bank account (mean=4.10; Std. dev. = 1.980); they further agreed that they can now easily transfer money from my bank account to another using their phones (mean=4.49; Std. dev. =.843). In addition, majority agreed that they can easily check their account balance using their phone (mean=3.69; Std. dev. = 1.139); they agreed that they can easily check their account balance using their phone at home in centenary bank (mean=3.37; Std. dev. =1.216); they agreed that they often find it easy to pay bills using their cell phones and lastly, they agreed that they can easily check their account balance using their phone at home in centenary bank (mean=3.47; Std. dev. =1.081).

Further, key informant 4, and 1 indicated that a big number of their clients have remained hesitant to use telephone banking even though they have them and in so many ways affects their satisfactions with services of telephone.

Key informant 4 was quoted saying the following,

> "...the aging and retail clientele seem less welcome to these kind of innovation...they still want to work with the old systems, the adoption rate for corporate customers is close 85% compared to 75% from retail clients..."

Key informant 1 added,

> "....the nature of our market is affecting the telephone banking because even if you have a telephone and a cente account sometimes it is not helpful when a trader down in Kikuubo is selling a cloth to you because for them what they

need is cash…however, debit card transactions have been very much successful when you travel out and go in countries which have accepted this kind of system…it makes life easy… "

However, key informant 3 indicated that,

"….we have been able to engage in a number of partnerships with different organizations like Sheraton, ShopRite, dry cleaners, Cafe javas, Total, Shell, and many others…these automatically allows use of our telephone payments and debit cards… "

In summary, it can be understood that telephone transactions have been adequately utilized in centenary bank despite a few complaints related to the network, acceptability and charges associated with them.

Table 13: Mean Values showing experiences of bank officials regarding the performance of internet banking in Centenary bank

	N	Mini mum	Maxi mum	Mean	Std. Deviation	Interpretation
Majority of our clients welcomed the idea of providing information update about the bank through email alerts	66	1	5	3.54	1.147	Effective
Majority of our clients welcomed the idea of printing their account statement via internet	66	1	5	2.85	1.238	Moderate
Our credit card services have been free from security risks	66	1	2	1.50	.502	Very ineffective
I have not heard any complaint of account compromise in Centenary Bank over internet	66	1	4	1.79	.870	Very Ineffective
Prepaid card services are secure in centenary bank	66	1	4	2.46	1.067	Ineffective
There are no problems in networks regarding internet banking	66	1	4	3.21	.589	Moderate
Mean average				**2.88**	**1.22**	**Moderate**

Source: Primary Data

The mean average of 2.80 at the standard deviation of 1.22 indicates that internet in Centenary Bank is generally moderate. Internet banking in centenary bank is moderate because majority of the respondents noted that there are no problems in networks regarding internet banking (mean=3.21; Std. dev. =.589); and they also showed that majority of the clients welcomed the idea of printing their account statement via internet (mean=2.46; Std. dev. = 1.607).

Respondents further rated some two items under internet banking as very ineffective as they strongly disagreed with the view that thy have not heard complaints of account compromise in Centenary Bank (mean=1.79; Std. dev.=1.870); and they also strongly disagreed with the view that credit card services have been free from security risks (mean=1.50; Std. dev.= .502). In addition, they rated one item under internet banking as ineffective, as they disagreed with the view that they have not heard any complaint of account compromise in Centenary Bank over internet (mean=2.85; Std. dev. =1.238).

Never the less, one items was rated as effective under internet banking as many agreed that majority of their clients welcomed the idea of providing information update about the bank through email alerts (Mean=3.54; Std. dev. = 1.1147).

Majority of responses from key informants were congruent with what majority of respondents said in the questionnaire. They opined that the advancement in technology has led a big number of people to adopt internet banking.

It was quoted from key informant 3 saying:

> "...internet banking has been effective since currently many of our clients love banking when they are in their offices or homes...I think internet banking is a factor in improving customer satisfaction because issue delays in long queues at the bank are limited"

However, some key informants pointed out that internet banking has had several limitations which affects customer satisfaction.

Key informant 1 said,

> "...there is still a perception issue related to internet banking...many clients
> still think that it is embedded with a lot of fraud and network issues...this is not
> true though it affects uptake"

Internet banking services have been adequately utilized in Centenary bank despite a few complaints related to the reliance on smartphones which cannot be afforded by all the clients of the bank and the perceptions related to fear of likely fraud as a result of using internet banking.

Table 14: Mean Values showing experiences of customers regarding internet banking in Centenary bank

	N	Mini mum	Maxi mum	Mean	Std. Deviation	Interpretation
The bank provides me information update through email alerts	59	1	5	4.30	.930	Very Effective
I can now print my account statement via internet	59	1	5	3.93	1.059	Effective
My internet transactions are free from security risks	59	1	5	4.46	.894	Very effective
My account has not been compromised in Centenary Bank through internet	59	1	5	4.13	.909	Effective
Prepaid card services are secure in centenary bank	59	1	5	4.34	.827	Very effective
I often find no difficulty in networks regarding internet banking	59	1	5	3.78	.980	Effective
Mean average				**4.38**	**.891**	**Very Effective**

Source: Primary Data

The mean average of 4.38 at the standard deviation of .891 indicates that internet banking in Centenary Bank is generally very effective. Internet banking in centenary bank is very effective because majority of the respondents strongly agreed that prepaid card services are secure in centenary bank (mean=4.34; Std. dev. =.827); they also strongly agreed that their internet transactions are free from security risks (mean=4.46; Std. dev. = .894); and they further strongly agreed that the bank provides them information update through email alerts (mean=4.30; Std. dev. =.930).

In addition, three items were rated as effective since majority of customers agreed that they often find no difficulty in networks regarding internet banking (mean=3.78; Std. dev. = .980); they agreed that their account has not been compromised in Centenary Bank through internet (Mean =4.13; Std. dev. =.909); and lastly they agreed that they can now print account statement via internet (mean=3.93; Std. dev. =1.059).

In line with the study findings, certain key informants were recorded saying,

> *"...the uptake of internet banking among older generation is still very low which has effected overall adoption by close to 45%...and as you know, the less the adoption, the less the satisfaction..."* (Key informant 2 added)

Another key informant showed that,

"...since internet banking requires use of smartphones...there are a good number of our clients who have no smartphones...so these are affected in many ways" (Key informant 5 added)

4.4 Performance of Centenary Bank

The performance at Centenary Bank was also examined in terms of efficiency, effectiveness and customer satisfaction, and mean ranges and standard deviation were also used to assess the level of mean values. Mean ranges from 1.00-1.79 indicated that majority of the respondents strongly disagreed with the items investigated under performance of Centenary Bank, thus, the performance of the bank is very low; mean ranges from 1.80-2.59 show that majority of the respondents disagreed with the items investigated under performance of Centenary Bank, thus, the performance of the bank is low; mean ranges from 2.60-3.39 indicate that majority of the respondents were took a neutral position about the items investigated under the performance of Centenary Bank, thus, the performance of the bank is moderate; mean ranges from 3.40-4.19 show that majority of the respondents agreed with the items investigated under

performance of Centenary Bank, thus, the performance of the bank is high; and lastly; mean ranges from 4.20-5.00 portray that majority of the respondents strongly agreed with the items investigated under performance of Centenary Bank, thus, the performance of the bank is very high. The data on the performance of Centenary Bank is presented in Table 15 and 16.

Table 15: Mean Values showing perceptions of bank officials regarding the performance of Centenary bank

	N	Minimum	Maximum	Mean	Std. Deviation	Interpretation
Customers are often excited of Centenary Bank services	66	1	5	2.98	1.078	Moderate
We often register an increase in the number of customers joining Centenary Bank each years	66	1	5	4.16	1.042	High
Customers complaints have drastically reduced in the last 3 years	66	1	5	3.50	1.109	High
We have expanded our businesses in the last 3 years	66	1	5	4.18	.862	High
Centenary Bank offers timely services	66	1	5	3.81	1.022	High
Our position in the banking industry keeps on improving each year	66	1	5	3.64	1.009	High
Centenary bank offers customers opportunities for personal financial growth	66	1	5	3.38	1.161	Moderate
We have not lost much money into fraud in the last 3 years	66	1	5	4.06	1.153	High
We have a good relationship with our customers	66	1	5	4.05	.945	High
Mean average				**3.77**	**1.02**	**High**

Source: Primary Data

Results in Table 15 shows that the performance at Centenary Bank is generally high. This finding is supported by the overall mean average of 3.77 and standard deviation of 1.02 that mean a high rating scale. Performance of Centenary bank is high because majority of the

respondents agreed that the bank has a good relationship with customers (mean=3.21; Std. dev. =.589); they also agreed that they have not lost much money into fraud in the last 3 years (mean=2.46; Std. dev. = 1.607); they also agreed that the bank has not lost much money into fraud in the last 3 years (mean=2.46; Std. dev. = 1.607); more still, they agreed that the bank position in the banking industry keeps on improving each year (mean=2.46; Std. dev. = 1.607); they also agreed that Centenary Bank offers timely services.

In addition, majority of respondents continued to agree that the bank has expanded its businesses in the last 3 years (mean=2.46; Std. dev. = 1.607); they also agreed that customers complaints have drastically reduced in the last 3 years (mean=2.46; Std. dev. = 1.607) and they agreed that the bank often register an increase in the number of customers joining.

Never the less, two items were rated as moderate under performance of centenary bank as many noted that Centenary bank offers customers opportunities for personal financial growth (mean=2.46; Std. dev. = 1.607); and they also remained moderate that customers are often excited about Centenary Bank services

Table 16: Mean Values showing perceptions of customers regarding the performance of Centenary bank

	N	Mini mum	Maxi mum	Mean	Std. Deviation	Interpretation
I keep choosing Centenary Bank over time	59	1	5	3.80	.739	High
I have been banking with Centenary Bank for a good number of years	59	1	5	3.81	.767	High
I often recommend some people to bank with Centenary bank	59	1	5	3.49	.975	High
I entrust Centenary Bank with my money	59	1	5	4.34	.827	High
Centenary Bank services are timely	59	1	5	3.78	.980	High
I have no complaint about the services offered in Centenary Bank	59	1	5	3.80	.739	High
I have always found this bank's services the best over other banks in Uganda	59	1	5	3.81	.767	High
I have never been a victim of fraud at centenary bank	59	1	5	3.49	.975	High
I have recommended a number of friends to join centenary bank	59	1	5	3.49	.975	High
Mean average				**3.80**	**.733**	High

Source: Primary Data

Results in Table 16 shows that the performance at Centenary Bank is generally high. This finding is supported by the overall mean average of 3.80 and standard deviation of .733 which mean a high rated scale. Performance of Centenary bank is high because majority of the

respondents agreed that they have recommended a number of friends to join centenary bank (mean=3.49; Std. dev. =.975); they also agreed that they have never been victims of fraud at centenary bank (mean=3.49; Std. dev. = .975); they also agreed that they have always found the bank's services the best over other banks in Uganda (mean=3.81; Std. dev. = .767); more still, they agreed that they have no complaint about the services offered in Centenary Bank (mean=3.80; Std. dev. = .739).

In the same line, they also agreed that Centenary Bank services are timely (mean=3.78; Std. dev. =.980); they trust Centenary Bank with their money with no second thought (mean=4.34; Std. dev. = .827); they also agreed that they have often recommended some people to bank with Centenary bank (mean=3.49; Std. dev. = .975); they further agreed that they have been banking with Centenary Bank for a good number of years (mean=3.81; Std. dev. = .767) and lastly, they agreed that they keep choosing Centenary Bank over time (mean=3.80; Std. dev. = 1.739).

These findings seem synonymous with what most of the key informants indicated. For instance, a big number of key informants opined that the performance of centenary bank has been improving because the bank keeps receiving new and new clients every year. One of them was quoted saying:

> "...with the introduction of debit cards, the number of clients have been raising due to the recent campaigns of digital life account where a client can open an account online...this has made the lives of different clients easy and the number of Centenary bank customers has been seen has raising..." (Key informant 3)

In addition, other key informants opined that because of convenience and location, most of the clients are very much satisfied with its services, it was quoted from of the key informants (5) saying:

> "...it is true the number of customers have been raising.... we basically serve to kind of customers, that is, the corporate and retail...we have had an increment of about 85% of corporate customers and 75% of retail customers..."

Further, key informant (2)

> "...there has been some complaints regarding the amount of money that can be deposited using ATM, complaints regarding fake notes, and many others, however, this can only take 2% of our clients but the biggest number always fight within and they are usually helped out..."

The quotations thus can be interpreted to mean that customer satisfaction at Centenary Bank is prevalent especially when it comes to increasing number of clients, positive word of mouth, referrals and the location of the bank that makes it accessible to its clients. The findings from the questionnaires and interviews were synonymous with what was established in documents reviewed. For instance, according to Bank of Uganda Annual Survey (2016), Centenary Bank has remained clean with no serious cases for the last 15 years in Uganda. Secondly, Centenary Bank Annual Reports (2010-2018) shows no cases of fraud publically faced by the bank. This indicates that there are no cases that may be compromising the satisfaction of customers at Centenary bank. This reflects improved customer satisfaction.

4.4 Research Objectives

4.4.1 Relationship between e-funds transfer and the performance of Centenary Bank

The first research objective of this study examined therelationship between e-funds transfer and the performance of Centenary Bank. To establish the relationship between e-funds transfer and the performance of Centenary Bank, a Pearson correlation was employed and the findings are established in Table 17.

Table 17: Correlation between e-funds transfer and the performance of Centenary Bank

		E-Funds Transfer	performance
E-Funds Transfer	Pearson Correlation	1	.472**
	Sig. (2-tailed)		.000
	N	125	125
Performance	Pearson Correlation	.472**	1
	Sig. (2-tailed)	.000	
	N	125	125

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

Source: Primary Data

The findings presented in Table 17 indicate that there is a positive and significant relationship between E-funds transfer and the performance of Centenary Bank. This finding is indicated in the r. value of .472**and significant value of 0.000. This meant that the first hypothesis which was stated that "There is no significant relationship between Electronic fund transfer and performance of Centenary Bank is not significant" was rejected. This finding thus implies that

any unit improvement in effectiveness of e-funds transfer can lead to improvement in the consortium's level of performance of Centenary Bank by 47.2%.

The findings from the key informants seemed supportive of the above findings from the questionnaire. From the interviews conducted, it was indicated by 79.2% of the interviewees that E-fund transfer services had improved on performance of the bank. They opined that the credit card system adopted by the bank has increased the number of loans given out and due to E-fund transfer, ATMs can now operate for 24hrs which has increased on deposits and withdrawals at all the time and this means income for the bank. 74% of the interviewees informed that E-fund transfer has led to easy swapping of money from one account to the other which has increased on cash available in the bank and this is financially called liquidity. One of the key informants or administrative staffs in the bank was quoted saying,

> *"This is a global wave that cannot be avoided…in fact as an administrator we call E-Fund transfer a form of technical efficiency which has made it easy for client to receive money or send money at their own convince and this has not only made it convenient for the bank but however, it has increased business outputs…"* Key Informant 5.

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 has change 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 customer satisfaction of a financial institution.

Comparing the study findings on the relationship between E-funds transfer and the performance of Centenary Bank and the studies by other scholars whose work is reviewed in the literature, it can be noted that the study finding in the case of Centenary bank is in agreement

with the ones by (Nwankwo, 2012) who had established that the introduction of 24hour ATMs in the three selected banks in the study had positively and significantly influenced the financial performance of commercial banks. They established that this is because ATMs had expanded the business of banking to areas far away from town to rural based banking. People in villages could easily access their finances without delays.

Further, the study findings were in line with the earlier study done by (Jean, 2018) who undertook a study to investigate the relationship between installed ATMs on performance of commercial banks. The study found out that the introduction of ATM in Rwanda banking sector had significantly improved on its performance in both finances and customer satisfaction.

Further, the study findings are in line with a study done in Tanzania by (Nganyanyuka, 2017) which found out that the introduction of credit and debit card had changed the financial performance of commercial banks in Tanzania. This was attributed to the fact that credit and debit card has widened the extent to which customers used their funds than before. This in the long run has improved on perceived profitability, efficiency and effectiveness of these commercial banks.

4.4.2 Relationship between telephone banking and the performance of Centenary Bank

The second research objective of this study examined therelationship between telephone banking and the performance of Centenary Bank. To establish the relationship between telephone banking and the performance of Centenary Bank, a Pearson correlation was employed and the findings are established in Table 18.

Table 18: Correlation between telephone banking and the performance of Centenary Bank

		Telephone banking	Performance
Telephone banking	Pearson Correlation	1	.540**
	Sig. (2-tailed)		.000
	N	125	125
Performance	Pearson Correlation	.540**	1
	Sig. (2-tailed)	.000	
	N	125	125

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

Source: Primary Data

The findings presented in Table 18 indicate that there is a positive and significant relationship between telephone banking and the performance of Centenary Bank. This finding is indicated in the r. value of .540**and significant value of 0.000. This meant that the first hypothesis which was stated that "The relationship between telephone banking and performance of Centenary Bank is not significant" was rejected. This finding thus implies that any unit improvement in effectiveness of telephone banking can lead to improvement in the consortium's level of performance of Centenary Bank by 54%.

The views from the key respondents continually supported the above position, where 66% of the interviewees admitted that telephone banking had been adopted by Centenary Bank, and it had so far been able to improve customer satisfaction of the bank. In essence, the biggest portion of interviewees looked at telephone banking is undergoing and having improved on customer satisfaction positively. This is because 64% of the key informants showed that telephone banking has enhanced on distant and busy customers which has improved on net

interest margin. 56% of the interviewees further noted that it is now easy to pay all monthly bills using a phone and this improved on saving made with Centenary Bank. One of them was quoted:

"By now it is easy to reach out to a customer in case of any problem because they can easily be reached on their phones. People have their accounts in their hands and they can do most of the banking services they need within minutes and this has increased on bank efficiency..." Key informant 5.

46% of the interviewees still in congruence indicated that Centenary Bank has smart card systems in place which has expanded bank's assets. 42% said that a customer can now withdraw his/her finances using his/her phone from the bank and this has increased on bank's net interest margin.

Comparing the study findings on the relationship between telephone banking and the performance of Centenary Bank and the studies by other scholars whose work is reviewed in the literature, it can be noted that the study finding in the case of Centenary bank is in agreement with the ones by (Ahmad, 2017), who had earlier investigated the role of telephone banking systems on financial performance at Frontier Bank. The study ascertained that since telephone banking provides a facility that can allow customers to access their bank accounts wherever they can be. Customers only dial and dial and press buttons or make calls and easily have their money at their disposal. Telephone banking has made it easy for clients to have access to their information just by pressing a button of inquiry. (Ananth S. a., 2016) add that telephone banking allows phones to access their computers and identify the users authentically. The codes are easily replied too and allow convenience in banking and accessing finance among the customers (Al-Ashban, 2012).

Further, in line with study findings, (Amedu, 2015) in their study in relation to the impact of telephone banking on customer satisfaction in Mozambique Banking industry. They ascertained that telephone banking is too important in transforming the banking industry especially when it comes to attracting a big number of following. It was established that in the five years, this kind of digital or digital money transfer has been in place, over 22% of citizens had been included on banking rotation in the country. Majority of these people were rural dwellers who are engaged in agriculture and grazing including those in small businesses. It was established that there was clear positive word of mouth concerning with one customer recommending others. Banks and telecom companies increased their subscribers and clients by 17% in the space of five years. This shows how significant telephone banking was and has been on the improving customer satisfaction in Mozambique.

Lastly, the study findings indicated that there is a significant and positive relationship between telephone banking and the performance of Centenary Bank was in line with (Al-Ashban, 2012) who undertook a study while investigating the influence of money transfers using cell phones on performance of commercial banks in Indonesia. The study found out that the money transfers using cell phones had significantly improved on its performance in both finances and customer satisfaction.

4.4.3 Relationship between internet banking and the performance of Centenary Bank

The third research objective of this study examined the relationship between internet banking and the performance of Centenary Bank. To establish the relationship between internet banking and the performance of Centenary Bank, a Pearson correlation was employed and the findings are established in Table 19.

Table 19: Correlation between internet banking and the performance of Centenary Bank

		Internet banking	Performance
Internet banking	Pearson Correlation	1	.539**
	Sig. (2-tailed)		.000
	N	125	125
Performance	Pearson Correlation	.539**	1
	Sig. (2-tailed)	.000	
	N	125	125

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

Source: Primary Data

The findings presented in Table 19 indicate that there is a positive and significant relationship between internet banking and the performance of Centenary Bank. This finding is indicated in the r. value of .539**and significant value of 0.000. This meant that the first hypothesis which was stated that "There is no significant relationship between internet banking and performance of Centenary Bank is not significant" was rejected. This finding thus implies that any unit improvement in effectiveness of internet banking can lead to improvement in the consortium's level of performance of Centenary Bank by 54%.

The findings from the interviewees seemed congruent to what most of the respondents in the questionnaire had indicated. 88% of the interviewees agreed with the view that internet banking had a positive relationship on performance in Centenary Bank but 79% of them raised issues to do with ignorance, price and networks. These people had an opinion that internet banking has not yet led to real customer satisfaction since few people are aware of it and not all those who are aware cannot afford the price of the internet. In addition, some of those who can afford are disturbed by networks. In confirmation, one of the key informants said:

"Internet banking is still a new thing in most eyes of our clients because it calls for basic knowledge of using a computer or internet and since our target population is both formal and informal, some of them are left trailing but so far, the few clients that have been enrolled on this system have had much benefits and have made bank's work efficiency and effective ..." Informant 5.

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 customer satisfaction.

In comparison with the study findings, (Ananth S. a., 2016) in a meta-analysis study to ascertain the relationship between internet banking and bank fraud in commercial banks in Liberia. They found out that internet banking had moderately contributed to ongoing bank fraud. They argued that internet banking provides convenience on the side of the customers because it allows customers to access their accounts in their houses, offices and parties. It reduces levels of insecurity involved in impersonation. However, they found out that internet banking came with both advantages and disadvantages. One of the main disadvantage is precipitating criminal activates like fraud, mishandling of accounts, increased spending of funds on the side of customers, financial insecurity and easy to access to finances whenever one wants to spend. They added that internet banking as the most and easiest way of transferring money. They believe that the relationship between customers and their banks increases, minimizes chances of errors, makes it easy on the side of the bank to market their new products to their customers while using internet based messages that are instantly read by clients. With the introduction of internet banking, the profitability of most commercial banks was seen going high and high. The period of between 2007 and 2013, made a number of commercial banks close to 14% improve their profitability and asset base, and as a consequence their customers rose by 18%.

Further, (Agwu E. a.-l., 2018) are in line with the study findings. In their study in Nigeria assessing the relationship between internet banking, customer satisfaction and performance of commercial banks in Lagos.They discovered that internet banking has been on a forefront of measures that is being advised to a number of commercial banks to improve their customer satisfaction because of its importance in safeguarding information and required privacy. However, on contrary, they found out that the introduction of internet banking did not necessarily improve customer satisfaction as it is indicated but rather it had increased on complains of insecurity which in many ways affected the financial performance of Nigerian banking industry.

The above findings further concur with the study done by (Ananth S. a., 2016) in one of their studies in this area found out that at the initial stages of internet banking, a big majority of customers applied for it but after three years, over 23% of the customers had pulled arguing that internet banking supported fraud and impersonation. A number of customers indicated cases of losing money to impersonators and others stole money in the name of friends. (Agwu E. a.-l., 2018) added that the survey also identified issues to do with networking. The loss of network and ignorance of a big number of customers made them think that internet banking was-not deserving. It was thus concluded that internet banking had not favourably improved customer satisfaction in some cases especially when it comes to networking and increasing number of fraudsters sending disguised information in the name of others.

4.5 Regression Analysis between the Independent Variables and Dependent Variable

To verify the research findings obtained through correlation, multiple regression analysis: through the model summary and the regression coefficients were employed and the findings regarding these are presented in Table 20 and 21.

Table 20: Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.585[a]	.343	.328	.569

a. Predictors: (Constant), Internet Banking , E-Funds Transfer, Telephone Banking

Source: Primary Data

The model summary shows the R. Square and this tells us that .343 percent of the observed variability in the performance of Centenary Bank is explained by the independent variable which is electronic banking systems (e-funds transfer, telephone banking and internet banking). R. value of .585[a] is the correlation coefficient between the observed value of independent variable and the predicted value based on the regression model. A value close to zero tells that the independent variable is not linearly related to the dependent variable. Since the observed R. Value is moderately high at 0.343, this indicates that the linear regression model fits well. The adjusted R. Square (.343) is the proportion of the variability in the dependent variable explained by the linear regression.

Table 21: Regression Coefficient Electronic Banking and Performance of Centenary Bank

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.544	.496		3.115	.002
E-Funds Transfer	.291	.145	.210	2.005	.047
Telephone Banking	.191	.247	.516	.774	.000
Internet Banking	.250	.090	.335	2.778	.006

a. Dependent Variable: performance

Source: Primary Data

The research findings in Table 4.21 clearly indicate that electronic banking as regards to e-funds transfer, telephone banking and internet banking have positive and significant relationship with performance of Centenary Bank. This finding is indicated in the β value of .210 at significant value of 0.047 for e-funds transfer; β value of .516 at significant value of 0.000 for telephone banking and β value of .335 at significant value of 0.006 for internet banking. Considering the Beta values, it can be noted that the item under electronic banking with the highest influence on the performance of Centenary Bank is telephone banking as it has the highest Beta value as compared to the remaining three items under electronic banking and the one with the least influence on performance in the consortium is e-funds transfer as it has the least Beta value.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter summarizes the key research findings, draws conclusions based on the research objectives and findings and suggests recommendations to improve electronic banking so as to improve performance in Centenary Bank.

5.2 Summary of Key Findings

5.2.1 E-funds transfer and Performance of Centenary Bank

On the implementation of e-funds transfer in Centenary Bank, the mean average of 4.01 at the standard deviation of 1.03 indicates that the e-funds transfer in Centenary Bank is generally effective. On the relationship between e-funds transfer and performance in Centenary Bank indicates that there is a positive and significant relationship between e-funds transfer and performance of Centenary Bank. This finding is indicated in the r. value of .472** and significant value of 0.000. This finding implies that any unit improvement in e-funds transfer in Centenary Bank can lead to improvement in the consortium's level of performance by 47.2 %. This finding is indicated in the β value of .210 at significant value of 0.047 for e-funds transfer.

5.2.2 Telephone Banking and Performance of Centenary Bank

On the implementation of telephone banking in Centenary Bank, the mean average of 3.98 at the standard deviation of 0.907 indicates that the telephone banking in Centenary Bank is generally effective. On the relationship between telephone banking and performance in Centenary Bank indicates that there is a positive and significant relationship between telephone banking and performance of Centenary Bank. This finding is indicated in the r. value of .540** and significant value of 0.000. This finding implies that any unit improvement in telephone banking in Centenary Bank can lead to improvement in the consortium's level of performance

by 47.2 %. This finding is indicated in the β value of .516 at significant value of 0.000 for telephone banking.

5.2.3 Telephone Banking and Performance of Centenary Bank

On the implementation of telephone banking in Centenary Bank, the mean average of 3.98 at the standard deviation of 0.907 indicates that the telephone banking in Centenary Bank is generally effective. On the relationship between telephone banking and performance in Centenary Bank indicates that there is a positive and significant relationship between telephone banking and performance of Centenary Bank. This finding is indicated in the r. value of .540** and significant value of 0.000. This finding implies that any unit improvement in telephone banking in Centenary Bank can lead to improvement in the consortium's level of performance by 54 %. This finding is indicated in the β value of .516 at significant value of 0.000 for telephone banking.

5.2.4 Internet Banking and Performance of Centenary Bank

On the implementation of internet banking in Centenary Bank, the mean average of 4.38 at the standard deviation of 0.891 indicates that the internet banking in Centenary Bank is generally effective. On the relationship between internet banking and performance in Centenary Bank indicates that there is a positive and significant relationship between internet banking and performance of Centenary Bank. This finding is indicated in the r. value of .539** and significant value of 0.000. This finding implies that any unit improvement in internet banking in Centenary Bank can lead to improvement in the consortium's level of performance by 53.9%. This finding is indicated in the β value of .335 at significant value of 0.006 for internet banking.

5.3 Conclusions

On the association between e-funds transfer and the performance of Centenary Bank, this study concludes that there is positive and significant relationship between e-funds transfer and performance thus, any unit improvement in effectiveness in e-funds transfer in Centenary Bank can lead to improvement in the consortium's level of performance by 47.2%.

Concerning the relationship between telephone banking and performance in Centenary Bank, this study concludes that any variation in telephone banking will lead to a positive and significant variation in performance thus, any unit improvement in effectiveness in telephone banking in Centenary Bank can lead to improvement in the consortium's level of performance by 54%.

Finally, on the relationship between internet banking and the performance of Centenary Bank, this study concludes that there is a positive and significant relationship between effectiveness in internet banking and performance of Centenary Bank thus, any unit improvement in effectiveness in internet banking in Centenary Bank can lead to improvement in the consortium's level of performance by 53.9%.

5.4 Recommendations

In light of the above conclusions, below are the suggested recommendations as each study objective:

Basing on the study finding that E-funds transfer banking has a positive relationship with performance of centenary Bank, it is important that Centenary Bank ensures that E-funds transfer services are full installed and implemented in the bank services if its customer satisfaction is to improve. This can be done by investing in a number of technological products including the new devices of e-fund services being adopted in commercial banks globally.

Secondly, basing on the findings which showed that telephone banking has a positive relationship with performance in Centenary Bank., it is important that Centenary Bank ensures that it totally implements telephone related banking services if its performance is to improve. This can be done ensuring that all mobile money services across the country are enrolled in the banking system to ensure that clients can easily deposit or withdraw money in any place.

Finally, since the study revealed that internet banking has a positive relationship with performance in Centenary Bank, it is important that commercial banks take up mechanisms to see that internet banking is implemented among its clients if its performance is to improve. This can be done by educating and promoting the use of internet banking across the clients. Secondly, it can be done by investing in internet banking infrastructures which are required in increasing the passion of internet banking.

5.5 Areas recommended for further study

i) Future studies need to be conducted using a longitudinal approach to ensure that a deeper and critical investigations are done to ably assess the extent to which electronic banking affects the performance of commercial banks.

ii) A further study still should focus on measuring whether the issues of culture, trust, and consumer's attitude have an impact on electronic banking adoption in Uganda and whether this can be reflected in the performance of a commercial bank

iii) Expanding the study population to include other banks in Uganda.

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APPENDIX I: QUESTIONNAIRE FOR BANK OFFICIAL

INTRODUCTION

Dear Respondent,

The researcher is a student of Kyambogo University, Kampala Uganda pursuing a Master's degree in Business Administration (MBA). This questionnaire is intended to generate data and information on the topic "*Electronic Banking and Performance of Commercial Banks: a case study of Centenary Bank*". You have been selected to participate in this study because the contribution you make to Centenary Bank is central to the kind of information required. The information you provide will be solely used 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 circle the numbers representing the most appropriate responses for you in respect of the following items:

1. **Gender of the respondent**

   a) Male ☐   b) Female ☐

2. **Age Bracket in Years:**

   a) 20-29 ☐   b) 30-39 ☐   c) 40-49 ☐   d) above 50 ☐

3. **Level of Education:**

   a) Diploma ☐   b) Bachelor's Degree ☐   Post Graduate Diploma ☐

   d) Master's Degree ☐   e) Professional Qualification ☐

4. Duration at Centenary Bank

a) Below 2 Year ☐   b) 2-5 Years ☐   c) 6-10 Years ☐

d) 11-15 years ☐   e) above 15 years ☐

5. What is your current position?

a) Branch Manager ☐   b) Operations Manager   c) Supervisor ☐
☐

d) Credit Officer ☐   e) Banking Officer ☐

SECTION B: E-FUND TRANSFER

In this section please tick in the box that corresponds to your opinion/view in relation to the following statements below according to a scale of 1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, 5 = Strongly Agree

No	Statement	1	2	3	4	5
1	Our e-cheque services are very convenient					
2	Internet costs to access our banking system is affordable					
3	Many of clients have resorted to ATM services instead of lining up					
4	Cases of bank fraud have reduced as a result of ATM					
5	Credit card system has attracted many of our clients					
6	We often receive positive feedback from customers about our ATMs					

SECTION C: TELEPHONE BANKING

In this section please tick in the box that corresponds to your opinion/view according to a scale of 1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, 5 = Strongly Agree

No.	Statement	1	2	3	4	5
1	Many of our clients have welcomed the arrangement of centenary whereby a client can bank his or her money at their homes					
2	I have seen majority of our customers resorting to paying bills using cell phone in centenary bank					
3	I have seen majority of customers check their account balance using their phones					
4	I have heard no complaints of losses related to transfer money from one bank account to another using their phones					
5	Many of our customers have resorted to withdrawing money using a phone from the bank					
6	Our smart card systems has attracted majority of our clients					

SECTION D: INTERNET BANKING

In this section please tick in the box that corresponds to your opinion/view in relation to the statements provided below according to a scale of 1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, 5 = Strongly Agree

No.	Statement	1	2	3	4	5
1	Majority of our clients welcomed the idea of providing information update about the bank through email alerts					
2	Majority of our clients welcomed the idea of printing their account statement via internet					
3	Our credit card services have been free from security risks					
4	I have not heard any complaint of account compromise in Centenary Bank over internet					
5	Prepaid card services are secure in centenary bank					
6	There are no problems in networks regarding internet banking					

SECTION C: DEPENDENT VARIABLE – PERFORMANCE

In this section please tick in the box that corresponds to your opinion/view in relation to the statements provided below according to a scale of 1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, 5 = Strongly Agree

No.	Statement	1	2	3	4	5
1	Customers are often excited of Centenary Bank services					
2	We often register an increase in the number of customers joining Centenary Bank each years					
3	Customers complaints have drastically reduced in the last 3 years					
4	We have expanded our businesses in the last 3 years					
5	Centenary Bank offers timely services					
6	Our position in the banking industry keeps on improving each year					
7	Centenary bank offers customers opportunities for personal financial growth					
8	We have not lost much money into fraud in the last 3 years					
9	We have a good relationship with our customers					

THANK YOU FOR YOUR COOPERATION!

APPENDIX II: QUESTIONNAIRE FOR CUSTOMER

INTRODUCTION

Dear Respondent,

The researcher is a student of Kyambogo University, Kampala Uganda pursuing a Master's degree in Business Administration (MBA). This questionnaire is intended to generate data and information on the topic *"Electronic Banking and Performance of Commercial Banks: a case study of Centenary Bank"*. You have been selected to participate in this study because the transactions you make to Centenary Bank is central to the kind of information required. The information you provide will be solely used 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 circle the numbers representing the most appropriate responses for you in respect of the following items:

1. **Gender of the respondent**

   a) Male ☐   b) Female ☐

2. **Age Bracket in Years:**

   a) 20-29 ☐   b) 30-39 ☐   c) 40-49 ☐   d) above 50 ☐

3. **Level of Education:**

   a) Certificate ☐   b) Diploma ☐   c) Degree ☐

   d) Master's Degree ☐   e) Others specify…………… ☐

4. Duration for banking with Centenary Bank

a) Below 2 Year ☐   b) 2-5 Years ☐   c) 6-10 Years ☐

d) 11-15 years ☐   e) above 15 years ☐

SECTION B: E-FUND TRANSFER

In this section please tick in the box that corresponds to your opinion/view in relation to the following statements below according to a scale of 1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, 5 = Strongly Agree

No	Statement	1	2	3	4	5
1	I have my complaints about E-cheque services in centenary bank					
2	Internet costs to access my bank account is affordable					
3	ATM makes it easy for me transact with Centenary bank					
4	I am able to transfer my money by just a click of button					
5	Centenary Bank credit card services are efficient					
6	Centenary bank visa card services are efficient					

SECTION C: TELEPHONE BANKING

In this section please tick in the box that corresponds to your opinion/view according to a scale of 1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, 5 = Strongly Agree

No.	Statement	1	2	3	4	5
1	With Centenary Bank, I find it easy to bank my money using a cell-phone at home					
2	I often find it easy to pay bills using my cell phone in centenary bank					
3	I can easily check my account balance using my phone in centenary bank					
4	I can now easily transfer money from my bank account to another using my phone					
5	I often find it easy to withdraw money using my phone from the bank account					
6	Centemobile has been efficient for me					

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SECTION D: INTERNET BANKING

In this section please tick in the box that corresponds to your opinion/view according to a scale of 1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, 5 = Strongly Agree

No.	Statement	1	2	3	4	5
1	The bank provides me information update through email alerts					
2	I can now print my account statement via internet					
3	My internet transactions are free from security risks					
4	My account has not been compromised in Centenary Bank through internet					
5	My Prepaid card services are secure in centenary bank					
6	I often find no difficulty in networks regarding internet banking					

SECTION C: DEPENDENT VARIABLE – PERFORMANCE

In this section please tick in the box that corresponds to your opinion/view according to a scale of 1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, 5 = Strongly Agree

No.	Statement	1	2	3	4	5
1	I keep choosing Centenary Bank over time					
2	I have been banking with Centenary Bank for a good number of years					
3	I often recommend some people to bank with Centenary bank					
4	I entrust Centenary Bank with my money					
5	Centenary Bank services are timely					
6	I have no complaint about the services offered in Centenary Bank					
7	I have always found this bank's services the best over other banks in Uganda					
8	I have never been a victim of fraud at centenary bank					
9	I have recommended a number of friends to join centenary bank					

THANK YOU FOR YOUR COOPERATION!

APPENDIX III: INTERVIEW SCHEDULE FOR ADMINISTRATION STAFF

1. Position in the Centenary Bank...

2. Department

   ....

1a). Does Centenary Bank has required E-fund transfer?

   b) If yes, what forms of E-fund transfer installed in Centenary Bank?

   c) Have E-fund transfers improved performance in Centenary Bank?

2a). Does Centenary Bank have telephone billing systems?

   b) If yes, how is telephone banking operates in Centenary Bank?

   c) Has telephone banking improved on performance in Centenary Bank?

3a). Does Centenary Bank have internet banking?

   b) If yes, how is internet banking used in Centenary Bank?

   c) Has internet banking improved on performance in Centenary Bank?

THANK YOU SO MUCH

APPENDIX IV: BUDGET

Item	Unit	Unit cost (Ugsh)	Total (Ugsh)
Printing proposal books	5 copies, and 65pages @	150/= per page	48,750
Printing questionnaires	101 copies, each copy=5pages	150/= per page	83,250
Field data collection	Transport (to and fro Centenary Bank)	45,000 per route	90,000
	Communication (Airtime) (4 weeks)	30,000 per week	120,000
	Lunch (4 weeks)	50,000 per week	200,000
Data analysis			400,000
Miscellaneous			100,000
Total			**1,042,000/=**

APPENDIX V: TIMEFRAME/WORKPLAN

Activities	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Proposal writing	■	■								
Proposal defense			■	■						
Field data collection					■					
Data analysis					■					
Thesis writing					■					
Viva voce						■				
Graduation										■

APPENDIX VI: TABLE FOR DETERMINING SAMPLE SIZE FROM A GIVEN POPULATION

N	S	N	S	N	S
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	870	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367

N	S	N	S	N	S
130	97	650	287	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Source: Krejcie& Morgan (1970, as cited by Amin, 2005)

Note. N is population size.

S is sample size.