THE IMPACT OF ELECTRONIC BANKING ON FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN MASAKA MUNICIPALITY

A CASE STUDY OF DFCU BANK

MASAKA BRANCH

BY

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AUGUST, 2018
DECLARATION

I, NAGGAYI INNOCENT, hereby declare to the best of my knowledge that the content of this study was entirely my original work and has never been submitted to any university or institution of higher learning for an academic award.

Signature: __________________________ Date: ______________________

NAGGAYI INNOCENT
APPROVAL

This research report has been done under my supervision and now is ready for submission.

Signature

Date of submission: 01/10/2018

MR. LOGGYA HERBERT
(SUPERVISOR)
DEDICATION

I dedicate this research to the family of Mrs. Kibirige Namatovu Immaculate and to all the people who have rendered a hand for the success of this research especially my dad, my lecturers and all my brothers and sisters.
ACKNOWLEDGEMENT

First of all, I give glory to almighty God for his protection in health, knowledge, wisdom and determination to cover this journey.

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I thank the management of DFCU Bank Masaka Branch for the warm welcome and assistance in filling my questionnaires may God reward you abundantly.
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LIST OF ABBREVIATIONS

ATM - Automatic Teller Machine
BoU- Bank of Uganda
EAC- East Africa Community
FRC- Financial Reporting Centre
ICT- Information Communication Technology
IT - Information Technology
PIN- Personal Identification Number
PC- Personal Computer
PCI- Perceived Characteristics of Innovation.
ROA- Return on Assets
ROE- Return on Equity
SPSS- Statistical Package for Social Science
TAM- Technology Acceptance Model
TRA- Theory of Reasoned Action
USA- United States of America
ABSTRACT

Electronic banking has brought about a revolution in the functioning of banks as it offers major opportunities to banks and their customers. This has made the transition to electronic banking a necessity for banks in order to be viable. Despite its benefits, developing countries still lag behind in the adoption of electronic banking. This study was carried out to assess the effect of electronic banking on financial performance of commercial banks in Masaka Municipality a case study of DFCU Bank Masaka Branch. The objectives of the study were to determine the extent of e-banking adoption by commercial banks in Masaka Municipality, to establish the effect of e-banking on financial performance of commercial banks in Masaka Municipality and to establish relationship between e-banking and financial performance of commercial banks in Masaka Municipality.

Data was collected using questionnaires, and interview guide and it was later analyzed to be presented as a report. In the findings it was established that Electronic banking systems like ATM, mobile telephone banking and internet banking have a great impact on bank performance because they increase profitability, reduce bank cost of operations, and increase earnings of the bank, increase asset quality and capital adequacy of the bank.

In conclusion, it was recommended that the bank should establish ATM in different locations and constantly service them, keep on upgrading the system, work with internet service providers to ensure reliable connections and services provided and ensure constant power back up to solve the problem of power interruptions and service delivery.
CHAPTER ONE

1.0 Introduction

This chapter consists of background of the study, statement of the problem, Objectives of the study, research questions, scope of the study, justification of the study, significance of the study, definitions of key terms, limitations of the study and conceptual frame work.

1.1 Background to the Study

The history of electronic banking dated back in the early 1967 when Barclays bank launched its first auto tellers’ machine (ATM) at Anfield Town in north London, United Kingdom. While financial institutions took steps to implement e-banking services in the mid-1990s, many consumers were hesitant to conduct monetary transactions over the web. It took widespread adoption of electronic commerce, based on trailblazing companies such as America Online, Amazon.com and eBay, to make the idea of paying for items online widespread. With the development of the Internet and the World Wide Web (WWW) in the latter half of the 1990s, banks increasingly started using electronic channels for receiving instructions and delivering their products and services to their customers.

By 2000, 80 percent of U.S. banks offered e-banking with Bank of America becoming the first bank to top 3 million online banking customers, more than 20 percent of its customer base. In comparison, larger national institutions, such as Citigroup claimed 2.2 million online relationships globally, while J.P. Morgan Chase estimated it had more than 750,000 online banking customers. In 2004, E-Banking usage in Denmark had grown to 45% (Statistics Denmark, 2004). Jeevan (2000) notes that with rigid controls giving way to deregulation, banks are gearing up their communications infrastructure to obtain a competitive edge from E-Banking, which is fast becoming a reality in India. Nair (1999) points out that E-Banking is fast becoming a strategic necessity for most commercial banks, as competition increases from private banks and NBFI.

In Uganda, internet banking i.e. ATM was officially introduced by Standard Chartered Bank in 1997 and was later followed by various other commercial banks (Daily Monitor 16th August, 2004). Thereafter a mounting confidence rose in the banking sector that VISA Credit Cards would ease customers’ access to cash from their accounts, (Kakembo, 2001). In 2004 Bankom a local electronic financial transaction Services Company in Uganda introduced the use of ICT (Information Communication
Technology) where Cell Phones could also be used to transact business (Kanyegirire, 2004).

In July 2007, Bank of Uganda introduced an Electronic Fund Transfer (EFT) in an attempt to increase the payment system and decrease cash transactions. Though the ability of using internet is moderately low and electronic banking is still in its early stages (AC Nielsen Consul 2002) with the advantages of being harmless, effective, appropriate and cost-effective. Nevertheless, Ugandan domestic banks seem to be assured that electronic banking benefits might overshadowed fashioned banking services in the future (Daily Monitor 25th, February, 2010).

Today, a number of banks are functioning as internet only. This internet only-banks do not have a physical bank branches like their predecessors. They differentiate themselves by providing better rate of interest and internet banking facility. According to Anguelov C. E., Hilgert M.A et all (2004), the factors that contributed to this favorable setting were “the low interest rates, the boom in mortgage banking and deposit-gathering and favorable trends in market-sensitive businesses throughout the year.

A comprehensive and critical literature review of descriptive research work in the areas of Internet banking (IB), Point of Sale (POS), Mobile Banking (Kannabiran and Narayan, 2005) explained that in the recent past, The Indian financial services industry is undergoing rapid change and becoming intensely competitive. The common objective among Traditional and new players is to protect their customer base, and they also compete for new business. The emergence of Information Technology has become an important contributor towards the future development of Indian Financial services, particularly in banking industry with major issues being raised on competitive advantage of e-banking in developing economies.

This study was based on Technology Acceptance theory proposed by Davis in 1986. This theory has proven to be a theoretical model in helping to explain and predict user behavior of information technology (Legris, I, & Collerette, 2003). Technology Acceptance theory is considered an influential extension of theory of reasoned action (TRA), according to Ajzen and Fishbein (1980). This model is used because it tries to explain why a user accepts or rejects information technology. The theory provides a basis with which one traces how external variables influence belief, attitude, and intention to use premised on perceived usefulness and perceived ease of use.

According to TAM, one’s actual use of a technology system is influenced directly or indirectly by the user’s behavioral intentions, attitude, perceived usefulness of the system, and perceived ease of the system. The researcher used this theory because
electronic banking and the performance in the 21st century are quite interlinked which necessitated a study to establish the relationship between the adoption of the platform and the actual performance of the banks using DFCU Masaka as the case study.

DFCU bank has adopted development strategies in various ways to boost its performance through internet banking, Mobile banking, Real Time Gross Settlements, ATM deposits and agency banking as well as partnerships with several organizations. During the period of development, the bank has experienced remarkable performance in aspects of market share and profitability. The bank posted a profit of 1.8 billion in 2013 which was 14.3% growth from 2012. This result increased to 28.4% in 2013 and 35.1% in 2014 (BoU, 2014). Therefore, the study seeks to assess the effects of e-banking on financial performance of commercial banks’ in Uganda using DFCU as the case study as many studies considered only the traditional banks in their studies.

1.2 Statement of the problem

Electronic banking is one of the mostly adopted bank service by all banks in Uganda though it is not yet fully researched about to analyze its impact on banks’ financial performance. Using DFCU bank as the case study it’s in the researcher’s urge to thoroughly analyze the problem.

Despite the benefit of online banking, there are number of distinct issues and challenges that significantly affect both the banks and the customers. According to S.Mitham,(2017), a total of 49 percent of Americans do not participate in the online banking because they are used to the traditional banks, they fear cyber criminals who divert huge sums of money by hacking and causing a lot of financial losses, more difficulty in depositing and withdrawing money from online, technical issues such as the crashing of the system and making small budgets for inbound marketing hence affecting the adoption and usage of the system by many people. In addition, there are challenges such as internet security, customer trust, privacy, system delays by the mobile money transfer service providers, slow processing of transactions especially during the weekends, high transactions costs, limit on the amount of money that can be withdrawn in a day, fraud and awareness were recognized as challenges of great importance according to a research conducted between 2005 and 2009 in Kenya. These challenges have for long exerted pressure on the general level of adoption of the electronic banking and their corresponding performance impact on finances of the banks which this study critically analyzed using DFCU as the case study.
1.3. Main objective of the study

The main objective of the study was to establish the impact of electronic banking on financial performance of commercial banks in Masaka Municipality using DFCU bank as the case study.

1.3.1. Specific objectives of the study

To determine the extent of e-banking adoption by commercial banks in Masaka Municipality, a case study of DFCU bank.

To establish the impact of e-banking on financial performance of commercial banks in Masaka Municipality, a case study of DFUC bank.

To establish relationship between e-banking and financial performance of commercial banks in Masaka Municipality, a case study of DFCU.

1.4 Research Questions

What is the impact of e-banking adoption on financial performance of commercial banks in Masaka Municipality?

What is the relationship between e-banking and financial performance of commercial banks in Masaka Municipality?

1.5 Scope of the study

The study was carried out at DFCU bank, Masaka branch with focus on E-banking and financial performance.

1.5.1 Geographical scope

The study was conducted in DFCU Bank Masaka Branch which is located along Masaka-Kampala road in Katwe-Butego Division, Masaka Municipality in Masaka District 3km from Masaka District Headquarters’ offices.

1.5.2 Content scope

The study critically examined the effect of electronic banking on the financial performance of DFCU bank using Masaka branch as the case study. It specifically considered extent of e-banking adoption, effect of e-banking adoption on financial performance and the relationship between e-banking and financial performance of this bank.
performance and the relationship between e-banking and financial performance of this bank.

1.5.3 Time scope

In terms of time scope, the study focused on a six years period running from 2012 to 2017. This is a sufficient period for analysing the effect of e-banking adoption on financial performance.

1.6 Significance of the study

The recommendations and findings of this study will help other commercial banks to identify and monitor challenges facing electronic banking adoption and also evaluate the development and growth of Electronic banking. In addition, banks will adopt the knowledge of electronic banking as a product of electronic commerce with a view to making strategic decisions.

Academicians will also benefit from this research work since it suggested the types of e-banking used in commercial banks and have thorough knowledge of electronic banking.

This study will also benefit the government through provision of information to aid policy formulation and enhancement of institutional infrastructure to strengthen e-banking penetration in the country and it is hoped that the adoption of this study's findings and recommendations are to contribute to the efforts towards the adoption of e-banking, identify best practices in offering e-banking products as well as constraints that impede growth so as to draw relevant policy implications.

1.7 Justification of the study

A study on effect of electronic banking on financial performance of commercial banks is a topic of considerable interest by many researchers today because there is a lack of understanding about the drivers of innovation because the innovation's impact on bank's performance remains untested Mabrouk & Mamoghli (2010). Previous researchers like Pooja and Singh (2009), have produced mixed results regarding the impact of innovations on bank performance. Pooja and Singh (2009), in their studies concluded that innovations had least impact on bank performance, while Batiz-Lazo and Woldesenbet (2006) and Mwania and Muganda (2011) concluded that financial innovation had significant contribution to bank performance. It is on this background that the researcher initiated this research to establish the effect of E-Banking on commercial banks performance specifically using DFCU bank as the case to investigate if electronic banking system can exert significant impact on the financial performance of the bank.

1.8 Definition of key terms
Financial Performance

Financial performance is a measure of how well a firm can use assets from its primary mode of business and generate revenues (Keown, Martin, Petty, & Scott, 2002).

E-Banking

Electronic banking is defined as the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels (Simpson 2002).

Figure 1.0 Conceptual framework of the study

Independent variable

E-Banking
- Mobile Banking
- Internet Banking
- Auto Tellers Machines

Dependent variable

Financial performance
- Capital adequacy
- Asset quality
- Earnings

Moderating variables
- Central Bank policies
- Economic Cycles

(Source: Researcher 2018)

The conceptual framework above, demonstrates the relationship between E-banking and financial performance. It indicates E-banking as an independent variable which involves: Mobile Banking, Internet Banking, Telephone Banking and Auto Tellers Machine. The framework shows that there are Extraneous factors that may influence the outcome from the relationship between E-banking and financial performance. These include the central bank policies and economic cycles. It was further assumed that if E-banking is applied well then there will be: more capital adequacy, asset quality, management, earnings and liquidity.
CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction
This chapter consists of the theoretical review and the review of the related literature.

2.2 Theoretical Review
This study adopted the Technology Acceptance theory originally proposed by Davis in 1986. TAM provides a basis with which one traces how external variables influence belief, attitude, and intention to use premised on the perceived usefulness and perceived ease of use of the technology. According to TAM, one's actual use of a technology system is influenced directly or indirectly by the user's behavioral intentions, attitude, perceived usefulness of the system, and perceived ease of the system.

2.3.0 Review of the related Literature

2.3.1 E-banking adoption by commercial banks
According to Wright and Raison, (2002), internet Banking provides clear advantages to both the financial institutions and the customers because from the banks' perspective, internet banking has very low-cost transactions, compared to human teller banking which implies that commercial banks have adopted this platform because of the benefits that accrue to the banking operation. The, ICEB Beijing (2004), noted that e-banking reduces customer service staff as customers use more self-service functions, there is less cheque processing costs due to an increase in electronic payments, costs of paper and mail distribution are reduced as bank statements and disclosures are presented online and there is less data entry as applications are completed and processed online by customers. However, this comes with its own cost such as the installation of the system and marketing. On the other hand, according to KPMG (1998), bank’s revenue increases from Internet Banking due to increased account sales, wider market reach, new fee-based income, new market opportunities improved customer satisfaction and the customers enjoy convenient, lower service charges, more accessible information about bank accounts, and an attractive option for busy people since it saves time to go to the bank branches and gives 24 hours access Lee and Lee, (2000).

Nyangosi et all., (2009) argues that in Uganda, majority of banks have introduced internet banking, mobile banking and other e-banking facilities to enhance delivery channels to their customers. However it is important that the introduction of these products be accompanied with programs to educate the consumer on the new and more innovative ways of conducting banking business. For example, while internet banking is fast and convenient mode of conducting banking transactions, this is yet to
gain acceptance among banking consumers due to fears of apprehension in this mode of banking. Like many other developing countries, e-banking in Kenya is at its early stages although banks are now open to other channels of delivery like mobile banking.

Muriuki (2009) conducted a study to assess the major factors that affected the adoption of e-banking by banks in Africa and the descriptive research data collected using a questionnaire revealed among the factors included organizational factors, perceived technological factors, perceived external factors and ultimately the banks with a strong support and commitment to e-banking from top management are more likely to adopt it and therefore to remain relevant and reap the benefits that come with technology including improved financial performance.

2.3.2 The effect of e-banking on financial performance

Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. This term is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. The acronym "CAMEL" refers to the five components of a bank's condition that are assessed based on Capital adequacy, Asset quality, Management, Earnings, and Liquidity.

Ddumba, (2014) argued that one of the benefits banks derive from electronic banking products and services delivery is improved efficiency and effectiveness of their operations so that more transactions can be processed faster and most conveniently, which will undoubtedly impact significantly on the overall performance of the banks.

The use of e-banking can contribute to improved bank performance, in terms of increased market share, expanded product range, customized products and better response to client demand (Richardson, 2012). E-banking continues to influence banks activities and their income structure. Among the activities that may be subject to stronger pressures for change are those that, up to today, have remained relatively insulated from ICT developments. Gikandi and Bloor (2010) investigated adoption and effectiveness of electronic banking in Kenya. The results showed that there was a drastic shift in the importance attached to some e-banking drivers between 2005 and 2009. In the 2005 survey, the number of other retail banks adopting e-banking was considered as a driver of medium importance by 70% of the banks, however, in the 2009 survey it was ranked among the extremely important drivers by a 100% of the banks. Similar observations were made in the case of competitive forces. This study was based in Kenya with no connection to Uganda's conditions which made the researcher to conduct a study in DFCU bank Uganda to infer real life data from within.
Okiro and Ndungu (2013) investigated the impact of mobile banking and internet banking on financial performance of financial institutions in Uganda. The study also sought to identify the extent of use of mobile and internet banking in financial institutions and the study results revealed that among the financial institutions surveyed, commercial banks had the highest usage of internet and mobile banking; SACCOs had the second highest usage whereas none of the microfinance institutions used internet banking. This study in the context of Uganda was too general yet the e-banking is used in all departments differently which forced the researcher to use DFCU as the case study by focusing on what each department have pertaining the e-banking platform.

Sumra, Manzoor and Abass (2011) carried out a study on the impact of e-banking on the profitability of Pakistani banks and the study results showed that e-banking has increased the profitability of banks; it has enabled the banks to meet their costs and earn profits even in the short span of time. This study in the context of Pakistan did not give the effects that profits generated and how they have helped the banks to grow and that is why the researcher conducted this study in Masaka to look at the direct effects of the system on the growth of the bank but not only generating profits.

As electronic banking is becoming more prevalent, so the level of customer satisfaction is also changing the scenario of technological environment. Information technology in form of e-banking plays a significant role in providing better services at lower cost. Several innovative IT based services such as Automated Teller Machines (ATM), Internet banking, Smart cards, Credit Cards, Mobile banking, Phone banking, Anywhere-Anytime banking have provided a number of convenient services to the customer so as the service quality improves, the probability of customer satisfaction increases. This study gives a good background of the effect of the system on banking performance but left out the financial performance aspect of the system which this study investigated vividly.

Osage (2012) in his study on electronic banking adoption by Kenyan Commercial banks concluded that while adoption of electronic banking was beneficial, it was affected by factors such as availability of services 24/7, quickened transactions and customer convenience. Pikkarainen et al (2004) in their work on consumer acceptance of online banking found two fundamental reasons underlying online banking development and diffusion. First, banks get notable cost savings by offering online banking services. It has been proved that online banking channel is the cheapest delivery channel for banking products once established (Sathye, 1999; Robinson, 2000; Giglio, 2002). Secondly, banks have reduced their branch networks and downsized the number of service staff, which has paved the way to self-service channels as quite many customers felt that branch banking took too much time and effort (Karjaluo et al., 2003). Therefore, time and cost savings and freedom from place have been found the main reasons underlying online banking acceptance.
1.3.3 The relationship between e-banking and financial performance

Kingoo (2011) investigated the relationship between e-banking and financial performance of commercial banks in Kenya. The study was conducted in the 43 commercial banks in Kenya. The study concluded that the adoption of electronic banking has enhanced Kenyan banking industry by making it more productive and effective. In addition, Ombati et al. (2010), tried to establish the relationship between technology and service quality in the banking industry in Kenya. The findings revealed that there is a direct relationship between technology and service quality which can translate to performance of the bank.

Banks that have embraced the use of electronic banking in Uganda have gone ahead to become the market leaders, (Muthini, 2013). For instance, DFCU introduced the use of mobile and agency banking in Uganda. Today, the bank has become one of the largest banks in Uganda by both assets and profitability (DFCU, 2014). The use of internet banking by DFCU has improved the bank's performance over the past few years. The first benefit for the banks offering electronic banking service is better branding and better response to the market. The other benefits are possible to measure in monetary terms. The main goal of every company is to maximise profits for its owner and other stakeholders. According to Allen and Hamilton (2002), an estimated cost of providing the routine business of a full-service branch in USA is $1.07 per transaction, as compared to 54 cents for telephone banking, 27 cents for ATM banking and 1.5 cent for internet banking.

The adoption of the electronic banking such as the internet banking, mobile banking and the use of ATM has a direct impact of the financial performance of the banks (Gitau, 2011). The low costs of these platforms have the effect of increasing the number of customers who have subscribed to the channels and who have overall subscribed to the banks as customers (Mwangi, 2014).

This has the effect of the banks having a huge customer base hence driving their income through the monthly account maintenance fees and an increase in customer deposits hence lower costs in attraction of capital for lending purposes (Ngugi, 2012). The low costs of the electronic banking ensures that Kenyans accessing informal financial services such Accumulating Savings and Credit Associations (ASCAs), Rotating Savings and Credit Associations (ROSCAs) and shylocks are diverted to the formal financial services (Tomno, 2014). The low transactional costs mean that banks, which operate on the high volumes low margins models, have the ability to increase their profitability by the proportionate increase in the customer numbers (Abondo, 2013). Customers who have subscribed to the electronic banking are able to execute additional value adding services such as Airtel money, MTN mobile money and Mpesa transactions and buying of airtime (Tomno, 2014). Through these services, the banks earn volume and transactional commissions from third party services provider such as Safaricom
(Kanogo, 2013). The accessibility of the customer's funds through electronic banking may fuel increased transactions hence revenue as the customers have easy access to their financial services provider whenever they are e.g. in leisure spots (Kinuthia, 2014).

To the general economy, e-banking has resulted in the creation of a better enabling environment that supports growth, productivity and prosperity. In addition, as e-banking operates in an electronically controlled and thoroughly monitored environment, it can discourage illegal and illegitimate practices associated with the banking industry like money laundering, fraud and embezzlement whose occurrence can have a huge negative impact on the institution's financial performance.

Kegan et al. (2005), in their research on how community banks (Microfinance institutions) performed with and without e-banking noted that online banking improves the financial performance and encouraged community banks to adopt new information technologies and offer targeted online services and with the falling costs of technology, they advise that it is imperative for the banks to consider e-banking as it has the ability to offer an enhanced range of services at low costs to customers conveniently.

2.4: Related literature gaps

According to the technology acceptance theory used in the research, there are only three factors that influence the use of technology by either an individual or organisation. That is to say user's intentions, attitude and the perceived usefulness of the system. This study went ahead and investigated other factors such as the cost incurred in acquiring the technology and the returns that accrue to using the system that make people to adopt their uses which many researchers did not consider.

The researcher also conducted the research because the aspect of scope in most of the literature did not consider Masaka Municipality as the study area. Therefore, the researcher investigated the effects of electronic banking on financial performance of DFCU bank. By making Masakaa central focus, the literature gaps of the scope were filled by this research.

The research was also conducted to supplement on the existing literature in Uganda as most of the studies were drawn from Kenya, Nigeria, America and from other continents which I do believe is of great impetus to future researchers, policy makes and the entire banking sector in Uganda.
3.0 Introduction

This chapter consists of the research design, the study population, sample size, sampling techniques, and sources of data, data collection instrument, validity, reliability, data analysis, ethical consideration and the limitation of the study.

3.1 Research Design

According to Mugenda and Mugenda (1999) research design is the outline plan or scheme that is used to generate answers to the research problems. This study adopted a descriptive cross-sectional research design.

3.2 Study Population

According to Mugenda and Mugenda (1999), a population is a complete set of individuals, cases or objects with some common observable characteristics. The target population for this study comprised of all ICT department staffs, card center, MIS analysts and Finance department staffs.

Table 1: The target population and sample design to be used

<table>
<thead>
<tr>
<th>Department</th>
<th>Population</th>
<th>Sample size</th>
<th>Sample design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Branch Manager</td>
<td>01</td>
<td>01</td>
<td>Purposive</td>
</tr>
<tr>
<td>ICT department staffs</td>
<td>10</td>
<td>10</td>
<td>Purposive</td>
</tr>
<tr>
<td>E-banking department staffs</td>
<td>19</td>
<td>19</td>
<td>Purposive</td>
</tr>
<tr>
<td>Finance &amp; Accounting staffs</td>
<td>20</td>
<td>14</td>
<td>Simple random sampling</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>44</td>
<td></td>
</tr>
</tbody>
</table>

(Source: DFCU bank 2017)

3.3 Sample size of the study

According to Kitavi (2014), a sample is a small group obtained from the accessible population. The researcher used a sample size of 44 respondents out of the study population of 50 staff of DFCU Masaka branch. This sample was arrived at using Slovène’s formula of sample size computation which states that;
\[ n = \frac{N}{1 + N (e^2)} \]

Where, \( n \) is the sample size,

\( N \) is the target population,

\( e \) is the error, which is 0.05

\[ N = \frac{50}{1 + 50(0.05)^2} \]

\( n = 44 \) respondents.

### 3.4 Sampling techniques

Two sampling techniques were used to select the required sample size for the study. Branch Manager, ICT department staffs and E-banking department staffs were selected purposively because of their informed positions on the effect of E-banking on bank performance while Finance & Accounting staffs were selected using simple random sampling technique. These techniques were used in order to make sure every member had equal chance to be part of the study.

### 3.5 Sources of data

Both primary and secondary data sources were used. Primary data was obtained using questionnaires administered to the different respondents in DFCU Masaka Branch about E-banking and performance. Secondary data was got from records and reports of the performance of bank such as Journals, text books, reports, quarterly releases, magazines and newspapers.

### 3.6 Data collection methods and instruments

The researcher used questionnaires and interview guide to collect data from the sampled respondents. It consisted of three sections: section one consisted of background information of respondent which investigated the demographic information of respondents, such as gender, education level, and working experience and their respective positions. Section two consisted of reasons for the adoption of E-banking by DFCU bank and types of e-banking tools used, section three considered the relationship between E-banking and performance. In addition, on some instances, the interview guide was also used to access in-depth information to supplement responses from semi-structured questionnaires. The administered interview guides assisted in getting more information about the effects of E-banking on financial performance. Using the interview guide the researcher interviewed branch Manager, head of ICT department, E-banking department and Finance & Accounting department.
3.7 Quality Control Methods

3.7.1 Validity

A validity test was carried out prior to the administration of the research instruments. A Content Validity Index (CVI) was calculated in order to establish the validity of the research instrument. The formula below was used by the researcher to establish the validity of the research instruments.

\[
\text{Content Validity Index (CVI)} = \frac{\text{Relevant items by all judges as suitable}}{\text{Total number of items judged}}
\]

The result of the CVI was 0.731 which is in line recommendation of Amin that suggested acceptance when its greater than 0.70. This implied that the questionnaire was valid for data collection (Amin, 2005).

3.7.2 Reliability

Reliability refers to the extent to which results are consistent over time and accurate to represent the total population, it is the consistency of research results if is repeated at different times and the same results are obtained Kothari (2008). A pretest method was used to test reliability of the research instruments before they were administered to assess their clarity. It was done by administering these questionnaires to selected respondents before the actual study and the results were not included in this study. The instrument was considered good for research purposes because the reliability was more than 0.81.

3.8 Data analysis

The research data collected was cleaned to ensure only adequately and appropriately answered questionnaires were considered, this was done to get rid of non-responses and extreme outliers. The cleaned data was then coded and analyzed using the descriptive with the aid of statistical packages for social sciences (SPSS). Descriptive analysis involved frequencies and percentages for demographic data and the tables and charts were used for other sections of the questionnaires.

3.9 Data collection Procedure

The researcher obtained a Letter of introduction from Kampala International University to proceed with the study after the proposal approval by the Head of Department. Permission was sought from DFCU Bank Masaka branch Manager to allow collection of data. The researcher got approved consent from the respondents and explained to them main purpose of the research as purely academic before engaging them in the
study. The researcher adopted a voluntary participation approach by respondents which allowed respondents to freely participate in the study, without influence from external forces.

### 3.10 Limitations of the study

During the research process, there was bureaucracy in obtaining approval to respond to questionnaires since the DFCU Masaka Branch Manager insisted that I seek permission from the DFCU branch Manager at the Head office in Kampala but later accepted and granted permission.

And it was also difficult to get the respondents to give timely and comprehensive primary data due to the sensitivity of the data that commercial banks hold. Most respondents sighted the fact that the nature of the data that was being sought was treated as highly confidential and accessible to few staff. The respondents were however reassured that the data collected was confidential and strictly for academic purposes only.
CHAPTER FOUR
DATA PRESENTATION, ANALYSIS AND DISCUSSIONS

4.0: Introduction

These findings were obtained from primary data collection. They were presented and analyzed using frequency tables and percentages to determine the effect of electronic banking on financial performance of commercial banks in Masaka Municipality with DFCU acting as the case study.

4.1 Personal data

The researcher investigated the gender, the level of education, position of respondents and the level of experience of respondents. The purpose of this was to discover if there is any relationship between gender, education level, and experience of respondents.

.1 Gender of respondents at DFCU bank, Masaka branch

The findings from the figure below indicate that the 62% of the respondents were males and 38% females. This meant that DFCU Bank was employing more males than females. This implies that there is work efficiency because males are so corporative than females.

Figure 2 Showing gender of respondents at DFCU bank, Masaka branch
2 Education level of respondents at DFCU bank, Masaka branch

The figure below shows that the biggest number of the respondents were degree holders with 56%. This followed with 24% for diploma holders, 20% for master’s holders, implying that DFCU Bank was employing qualified staff since the biggest number of the respondents were degree holders, and followed by diploma and master’s holders.

Figure 3 Showing education levels of respondents.

<table>
<thead>
<tr>
<th>Education levels of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>degree 56%</td>
</tr>
<tr>
<td>diploma 24%</td>
</tr>
<tr>
<td>masters 20%</td>
</tr>
</tbody>
</table>

1.3 Position of respondents at DFCU bank-Masaka Municipality branch

The chart below shows that DFCU Bank 42% of employees work in e-banking department, followed by finance and accounting with 34%, followed by ICT department with 22% and finally the branch manager who contributed 2% of the positions available in DFCU Bank.
4 Experience of employees

In reference to the chart below, 60% of the respondents had worked in DFCU Bank between 1-5 years, 31% of the respondents had worked for the bank for 5-10 years, 5% had worked for less than one year and 4% had worked for the bank for 10 years and above. This implies that the bank does not keep on shifting its employees to other branches because the majority of the workers had stayed at work for less than 5 years.
4.2 The extent of e-banking adoption by DFCU Bank in Masaka Municipality

The researcher found that 100% of the respondents agreed that the bank do offer e-banking services to its clients. This was true because out of the 45 questionnaires which were given, all of them tallied as far as offering e-banking to clients were concerned.

2.1 Reasons for the adoption of e-banking by DFCU Bank

In reference to the figure below, 62% of respondents strongly agreed that the reason for adoption of e-banking is reduced costs, followed by 20% who agreed, 7% were not sure, 9% disagreed and only 2% strongly disagreed that the reason for adoption of e-banking is reduce costs. However, according to Kasi (2014) argued that, today the successes of commercial bank largely depend on the effectiveness of its electronic banking systems because this leads to effective and efficient service delivery.
Figure 6 Showing reduce costs as one of the reasons for adoption of e-banking

![Reduce costs](image)

(Source: Researcher 2018)

Figure 7 Showing increase outreach as another reason for adoption of e-banking

From the graph above, 51% of respondents agreed that the reason for adoption of e-banking is that it increases outreach, followed by 23% who strongly agreed, 18% were not sure, 4% disagreed, and only 4% strongly disagreed that the reason for adoption of e-banking that it increases outreach.

![Increase outreach](image)
A total of 62% of respondents strongly agreed that the reason for adoption of e-banking is to gain a highly competitive advantage, followed by 36% who agreed, 9% were not sure, and none of them disagreed or strongly disagreed which means 98% strongly agreed and also agreed that the adoption of e-banking is to gain competitive advantage.

(Source: Researcher 2018)

Figure 9 Showing another reason for adoption of e-banking as to increase profitability

From the graph below, 44% of respondents strongly agreed that the reason for adoption of e-banking is that to increase profitability, followed by 20% who agreed, 16% were not sure, 11% disagreed, and only 9% strongly disagreed that the reason for adoption of e-banking that to increase profitability.
Increase profitability

(Source Researcher 2018)

1.2.2 Types of e-banking provided by DFCU BANK

Table 2: Showing types of e-banking

<table>
<thead>
<tr>
<th>Types of e-banking</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Not sure</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Total</th>
</tr>
</thead>
</table>
|                    | Freq | %    | Freq | %    | Freq | %    | Freq | %    | Freq | % 
| ATM                | 24   | 55   | 20   | 45   | -    | -    | -    | -    | 44   | 100  |
| Mobile banking     | 25   | 57   | 10   | 23   | 09   | 20   | -    | -    | 44   | 100  |
| Internet banking   | 18   | 41   | 16   | 37   | 05   | 11   | 05   | 11   | 45   | 100  |

(Source: Researcher 2018)

4.3 Relationship between e-banking and financial performance of commercial banks in Masaka Municipality

Presentation on ATM shows that 55% of the respondents strongly agreed that ATM is used by clients of DFCU Bank and also 45% of them agreed. This means that ATM is one of the E banking services commonly used by clients of DFCU Bank as it is
nemously accepted by the respondents. ATMs are electronic terminals that let you
ank almost any time. To withdraw cash, make deposits, or transfer funds between
accounts, you generally insert an ATM card and enter your PIN. Therefore, it provides
venience in banking. Mobile banking was represented by 57% of respondents who
rongly agreed that it is one of the types of e-banking used by DFCU Bank, followed by
3% who agreed and only 20% were not sure of about mobile banking as a type of e-
anking employed by DFCU Bank. Internet banking was also represented by 41% of
espondents who strongly agreed that it is another type of e-banking used by DFCU
ank, followed by 37% who agreed, 11% were not sure and 11% disagreed about
lectronic banking as a type deployed by DFCU Bank. Therefore, according to Nyangosi
et al., (2009) argues that in Uganda, majority of banks have introduced internet
anking, mobile banking and other e-banking facilities to enhance delivery channels to
ir customers.

1 E-banking and frequency distribution of transactional costs

rom the graph, 47% of the respondents strongly agreed that e-banking leads to
creased customer deposits, 22% were not sure, 13% agreed, 7% disagreed and 11%
rongly disagreed. Therefore, the researcher concluded that there is a very great
elationship between e-banking and financial performance because 47% of the
espondents greatly agreed that e-banking leads to increased customer deposits and
ence good financial performance.

Figure 10 Showing electronic banking has led to increased customer deposits
figure 11 Showing electronic banking has increased the frequency of customer transactions

A total of 33%, of the respondents strongly agreed and agreed that there is a relationship between e-banking and financial performance and this leads to frequency of customer transactions. This is because different e-banking types are used by DFCU Bank. Although 18% were not sure, 9% disagreed and 7% strongly disagreed, this doesn’t hinder frequency of customer transactions.

Figure 12 Showing e-banking has led to higher volumes of transactions

From the figure below, 56% of the respondents strongly agreed that there is a relationship between e-banking and financial performance and this leads to higher volumes of transactions because of using different e-banking types. They were followed by 21% who were not sure of the fact that the relationship between e-banking and financial performance leads to higher volumes of transactions. However, 7% agreed and other 7% disagreed although 9% of them strongly disagreed but basing on the majority respondents, the truth is that e-banking leads to higher volumes of transactions and hence financial performance.
Higher volumes of transactions

(Source Researcher 2018)

2 E-banking and financial performance in DFCU Bank

From the figure below, 38% of the respondents strongly agreed that e-banking leads to increased capital adequacy in DFCU Bank and hence leads to financial performance, followed by 27% who also agreed, 15% of the respondents were not sure about increased capital adequacy, but 13% strongly disagreed and 7% disagreed but this doesn’t hinder financial performance in DFCU bank since e-banking leads to increased capital adequacy.
Figure 13 Showing e-banking has increased capital adequacy in DFCU Bank

Source Researcher 2018)

Figure 14 Showing e-banking has increased asset quality and hence financial performance

From the figure below, 24% of the respondents strongly agreed that e-banking leads to increased asset quality in DFCU Bank and hence leads to financial performance, followed by 22% who also agreed, 31% of the respondents were not sure about increased asset quality, but 16% disagreed and 7% strongly disagreed but this doesn't hinder financial performance in DFCU bank since e-banking leads to increased asset quality.
Figure 15 Showing e-banking has increased earnings in DFCU Bank

From the figure below, 44% of the respondents strongly agreed that e-banking leads to increased earnings in DFCU Bank and hence leads to financial performance, followed by 40% who also agreed, 16% of the respondents were not sure about increased capital earnings, but 11% strongly disagreed and 9% disagreed that e-banking leads to increased earnings and so doesn’t boost financial performance.
CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter consists of a summary of findings, conclusions and recommendation. It suggests recommendations that DFCU Bank should implement to ensure that there is quick service delivery and reliability for better financial performance in the bank.

5.1 Summary of Findings

From the findings, 62% of the respondents strongly agreed that e-banking reduces costs, 61% strongly agreed that e-banking provides a competitive advantage over other commercial banks in Masaka Municipality, 51% agreed that e-banking increases outreach and 44% strongly agreed that e-banking increases profitability in the bank of which each of the mentioned impacts improve the financial performance of the bank.

The findings also show that, 47% of the respondents strongly agreed that the relationship between e-banking and financial performance leads to increased customer deposits, while 56% of them strongly agreed that it leads to higher volumes of transactions and 44% strongly agreed that the relationship leads to increased earnings.

Findings show that the bank had different e-banking types namely ATM which is one of the e-banking services commonly used by the clients of DFCU Bank with 56%, others are mobile banking with 33% and internet banking with 11%.

5.2 Conclusion

It should be noted that electronic banking plays a great role in financial performance of banks in Masaka Municipality and there is a strong positive relationship between e-banking and the financial performance of the bank.

Different electronic Banking System tools like ATM, mobile phone banking, and internet banking have a great impact on banks’ performance because they increase profitability, reduce costs, lead to competitive advantage and increase bank asset and promotes bank growth and expansion.

5.3 Recommendation

All banks in Uganda should adopt e-banking so as to improve their financial performance by reducing costs and many more advantages accrued to its usage.
The researcher recommends that ATMs should be put in different locations easily accessible by customers, so that quick service and convenience is maintained between the banks and customers hence successful bank operations. At the same time, they should be constantly serviced in order to provide reliability services to the customers. The banks should contract the services of internet service providers which are above the standard to provide reliable internet for effective and efficient service delivery to the customers.

Banks should also keep on upgrading their e-banking technology in order to have an up to date system for effective service delivery.

Constant power back up should be ensured in order to solve the problems of power interruptions and fluctuations which are very common in Uganda, mostly affecting the people in the rural areas that need the e-banking services more due to the location barriers.

5.4 Areas for Further Research

The study revealed with evidence that e-banking increases the bank performance. This study was done only in DFCU Bank. The study can also be extended to other financial markets such as capital and insurance companies in order to understand the implication of E-banking on the overall financial institutions in Uganda.

There is need to identify and understand the changes that E-banking is causing on the banking sector and the payments systems, in order to examine in detail how the recent (and foreseeable) advances in ICT are affecting the sector and can affect its future evolution. Therefore, a study on the effects of ICT on the banking sector and the payments system is recommended.
References


Elisha Menson, (2017), Centre for Policy and Economic Research, University of Abuja.


APPENDIX I

INTERVIEW GUIDE

1. What are the effects of adopting electronic banking on financial performance of commercial banks in Masaka Municipality?

2. How does electronic banking leads to increased capital adequacy in DFCU Bank?

3. What are the reasons for adoption of electronic banking by DFCU Bank?

4. What are some of the types of electronic banking do DFCU Bank use?

5. What is the relationship between electronic banking and financial performance of commercial banks in Masaka Municipality?

6. Does DFCU Bank offer electronic banking services to its clients?

THANKS FOR YOUR COOPERATION
SECTION A: PERSONAL DATA

Sex of the respondents

Male __________ Female __________

2. What is your highest level of education attained?

<table>
<thead>
<tr>
<th>Certificate</th>
<th>Diploma</th>
<th>Degree</th>
<th>Masters</th>
<th>PhD</th>
<th>Others</th>
</tr>
</thead>
</table>

3. Position of the respondent

(a) Branch Manager __________
(b) ICT department staffs __________
(c) E-banking department staffs __________
(d) Finance & Accounting __________

4. Experience

Less than 1 year __________ 1-5 years __________ 5-10 years __________ 10 and above years __________
SECTION B: The extent of e-banking adoption by DFCU Bank in Masaka Municipality

The study sought to establish the extent of e-banking adoption by DFCU Bank branch in Masaka Municipality.

5. Does DFCU Bank offer electronic banking services to clients?

Yes ________ No

6. If yes, what was the reason for adopting e-banking by your institution?

Rate each of the following items as; 1, 2, 3, 4, 5 where (1) will imply strongly disagree (2) for disagree (3) for agree, (4) for not sure and (5) for strongly Agree.

<table>
<thead>
<tr>
<th>Reason to adopt e-banking</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce Costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase Outreach</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competitive Advantage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased profitability</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. What are the different types of e-banking provided by DFCU Bank?

<table>
<thead>
<tr>
<th>Types of e-banking</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Not sure</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATMS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobile banking</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet banking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SECTION C: Relationship between e-banking and financial performance of commercial banks in Masaka Municipality

8. E-banking and frequency distribution of transactional costs

Rate each of the following items as; 1, 2, 3, 4, 5 where (1) will imply strongly disagree (2) for disagree (3) for agree, (4) for not sure and (5) for strongly Agree.

<table>
<thead>
<tr>
<th>Statements</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic banking has led to increased customer deposits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electronic banking has increased the frequency of customer transactions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electronic banking has led to higher volumes of transactions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. E-banking and financial performance DFCU

Rate each of the following items as; 1, 2, 3, 4, where (1) will imply strongly disagree (2) for disagree (3) for agree, (4) for not sure and (5) for strongly Agree.

<table>
<thead>
<tr>
<th>Statements</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic banking has led to increased Capital adequacy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electronic banking has increased Asset quality</td>
<td></td>
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<td></td>
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<tr>
<td>Electronic banking has led to increased earnings</td>
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</tbody>
</table>

THANKS FOR YOUR COOPERATION
## APPENDIX III

### ME FRAME

<table>
<thead>
<tr>
<th>Month</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>March</td>
<td>Submission of topic</td>
</tr>
<tr>
<td>April</td>
<td>Proposal</td>
</tr>
<tr>
<td>May</td>
<td>Proposal editing</td>
</tr>
<tr>
<td>June</td>
<td>Data collection</td>
</tr>
<tr>
<td>July</td>
<td>Analysis report writing</td>
</tr>
<tr>
<td>August</td>
<td>Report</td>
</tr>
<tr>
<td></td>
<td>Submission</td>
</tr>
</tbody>
</table>

36
<table>
<thead>
<tr>
<th>NO</th>
<th>ITEMS</th>
<th>AMOUNT (SHS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Printing</td>
<td>60,000</td>
</tr>
<tr>
<td>02</td>
<td>Airtime</td>
<td>15,000</td>
</tr>
<tr>
<td>03</td>
<td>Transport</td>
<td>100,000</td>
</tr>
<tr>
<td>04</td>
<td>Binding</td>
<td>28000</td>
</tr>
<tr>
<td>05</td>
<td>Pens</td>
<td>5,000</td>
</tr>
<tr>
<td>06</td>
<td>Internet bundle</td>
<td>20,000</td>
</tr>
<tr>
<td>07</td>
<td>An Umbrella</td>
<td>20,000</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td><strong>248,000</strong></td>
</tr>
</tbody>
</table>