

Mobile Banking Loans and Profitability of Commercial Banks in Uganda. A case study of the Centenary Bank (main branch) Kampala. A correlational cross-sectional study.

Rholine Atukwatse*, Dr. Muhammad Ssendagi
School of Graduate Study and Research, Team University.

Abstract

Background

This study aims to document the relationship between mobile bank loans and the profitability of Centenary Bank's main branch in Kampala, Uganda. Mobile banking refers to the act of enabling bank customers to access its services using mobile applications like phones and tablets. Mobile loans refer to the access to loans using mobile phones. A loan refers to when money is given to another party in exchange for repayment of the loan principal amount plus interest. Services include performing balance checks, getting loans, and loan payments, among others through a mobile device such as a mobile phone which is most used in developing countries like Uganda. Centenary Bank is one of the leading commercial banks in Uganda. Therefore, this study seeks to assess the relationship between mobile bank loans and the profitability of Centenary Bank's main branch in Kampala, Uganda.

Methodology

The study adopted a correlational, cross-sectional case study survey design.

Results

Based on the findings, there were significant positive correlations between profitability and mobile bank loans (0.324). This means that as these mobile loans increase, the profitability of Centenary Bank tends to increase as well. Further findings showed that 45.2% of the variation in profitability was been explained by mobile bank loans.

Conclusion

It can be concluded that mobile banking activities, including loans, have a positive impact on the profitability of Centenary Bank in Uganda.

Recommendation

Centenary Bank should leverage its mobile loan offerings to retain customers and increase profitability. This can be achieved through personalized loan offers, competitive interest rates, and efficient loan processing.

Centenary Bank should continuously monitor the market and adapt its loan offerings and interest rates to remain competitive while ensuring profitability.

Keywords: Mobile bank, Loans, Centenary, Profitability, Kampala.

Submitted: 2024-01-01 Accepted: 2024-02-18

*Corresponding Author: Rholine Atukwatse**

Email: rolinetuse@gmail.com

School of Graduate Study and Research, Team University.

Background of the study

Mobile banking refers to the act of enabling bank customers to access its services using mobile applications like phones and tablets. Mobile loan transfer refers to the access of loans using mobile phones. Services include performing loan payments and getting loans among others through a mobile device such as a mobile phone which is mostly used in developing countries (Nassiwa, 2019). A loan refers to when money is given to another party in exchange for repayment of the loan principal amount plus interest.

Over the past few years with advancements in information technology, the banking industry has completely transformed how business is conducted by various organizations on a day-to-day basis (Haralayya, 2021). The established advancement technology structures have consequently brought about the progress that exists now for mobile banking and online banking in the banking industry and have entirely changed how commercial

banks and financial institutions go about their businesses recently (Simon, Thomas, & Senaji, 2016).

Globally, with dynamics in the operating environment, banks and other financial institutions have embraced mobile banking to satisfy customer demands. Partnerships between financial institutions and other service providers have led to the growth of mobile banking as different customers can conduct their daily banking needs through their mobile devices at a relatively lower cost (Mwange, 2013). Further, commercial banks have already begun investing in mobile technology and security. They are introducing and developing smartphone apps, introducing various new features such as remote deposit of checks, and educating consumers among others. Therefore, this indicates that mobile banking acceptance among consumers has been increasing when compared to the situation of mobile banking penetration a year ago (Ala & Ngugi, 2013).

Recently, mobile money account adoption in Sub-Saharan Africa has outpaced growth in the rest of the world. The

report signals a growing trend for mobile banking on the continent (Asongu & Nwachukwu, 2016). From an empirical context, studies carried out in Africa suggest mixed findings regarding the impact of mobile banking on the performance of the banking sector.

The study noted that poor, vulnerable, and low-income households in Sub-Saharan Africa (SSA) countries often lacked access to bank accounts and faced high costs for conducting basic financial transactions. The invention of the mobile phone presented a great opportunity for the provision of financial services to the unbanked in Africa (Ismail & Masinge, 2012).

In Uganda, mobile banking was introduced in 2009 as a business model that involved a partnership between mobile money operators and commercial banks (Mawejje & Lakuma, 2019). The services offered have so far been restricted to domestic remittances, basic retail payments, and money storage services. Payment systems have been designed that are used in the transfer of funds electronically by all commercial banks currently.

Therefore, the objective of this study is to assess the relationship between

Mobile Banking Loans and Profitability of Commercial Banks in Uganda. A case study of the Centenary Bank (main branch) Kampala.

Methodology

Research design

The study adopted a correlational, cross-sectional case study survey design. The study was correlational since it established the relationship between the study variables. It was cross-sectional since it collected data at an appointment in time for a short period and the study had no follow-up on the findings.

A mixed research approach was also used for this study. Quantitative methods were used to quantify numerical data to describe current conditions while investigating the relationship between the two study variables. The study also used a qualitative approach to ascertain the in-depth information for the study variables while balancing opinions from several respondents (Amin, 2005).

Table 1: Study setting

Activity	Months
Concept paper writing	January
Research seminars	February
Proposal writing	March and April
Proposal defense	May
Dissertation writing	June
Viva Defense	June
Publication	June

Study Participants

Study population

The study population consisted of 152. These included 12 administrative bank managers, 125 lower bank officials, 10 IT staff, and 10 Uganda Bankers Association officials. All these were chosen because of their relevance to the study objectives.

Inclusive criteria

All those who were relevant to the study objectives were selected.

Sample size

The researcher had 110 respondents which were selected as the sample size of the study as shown in Table 1.

Table 2: Sample Size of Respondents and Sampling Technique

Category of Population	Population Size	Sample Size	Sampling Technique
Administrative staffs	12	11	Purposive sampling
Uganda Bankers' Association officials	5	5	Purposive sampling
IT staff	10	10	Purposive sampling
Lower bank officials	125	84	Random sampling
Total	152	110	

Source: CentenaryBank Human Resource Report (2022)

Therefore, the researcher selected 11 administrative staff of key bank departments, 5 Uganda Bankers' Association staff who are in charge of mobile banking transactions, 10 IT staff, and 84 lower bank officials of the commercial bank.

Sampling techniques

This study employed a random sampling technique representing a probabilistic sampling design and purposive sampling representing non-probability sampling. Simple random sampling was appropriately used for choosing lower bank officials in Centenary Bank. This technique was preferred because it reduced bias and allowed everyone to be selected to participate in the study.

Purposive sampling, was used in choosing administrative staff, Uganda Bankers' Association officials, and IT staff.

Data collection methods

Qualitative and quantitative methods were used in the collection of data. Original data was gathered using self-administered questionnaires and interviews. Secondary data was obtained from a review of documents such as journals, reports, planning documents, memos, and files.

Questionnaire survey

A questionnaire survey refers to a method of data collection that is designed with a series of short questions using both open and close-ended questions to allow prompt answers from respondents (Amin, 2005). This was employed to collect original data from bank lower officials in Centenary Bank. This involved the use of a close-ended questionnaire which allowed easy correlation and regression of the respondent's attitudinal disposition on the independent and dependent variables (Amin, 2005).

Interview

The study employed an interview method. The interview method means collecting data while asking differing questions that allow probing and prompting of respondent's answers. The researcher obtained more detailed information on mobile banking and the profitability of Centenary Bank.

This method was used by the researcher to obtain in-depth answers or information from key informants and allowed him to get clarification on anything that arose. The interview method was the best for administrative staff, Uganda Banker' Association officials, and IT staff.

Documentary review

The study collected secondary data guided by the documentary review checklist. The researcher reviewed documents to obtain information that was related to the study. This method enabled the researcher to find data at her appropriate time and gather data that was thoughtful by informants that would give attention in obtaining them and enable the researcher to obtain data in the language of the respondent.

Data collection instruments

The researcher used a questionnaire and interview guide to collect data for this study as follows.

Questionnaire

A questionnaire refers to a tool of data collection that is designed with a series of short questions using both open and close-ended questions to allow prompt answers from respondents (Amin, 2005). This was employed to collect original data from bank lower officials in Centenary Bank. This involved the use of a close-ended questionnaire which will allow easy correlation and regression of the respondent's attitudinal disposition on the independent and dependent variables (Amin, 2005). Secondly, the use of questionnaires allowed busy respondents to adequately

reserve time to answer the questions during their convenient hours.

Interview Guide

The study also employed an interview guide. An interview guide means collecting data while asking differing questions that allow probing and prompting of respondents' answers. The researcher obtained more information on mobile banking and the profitability of Centenary Bank. This tool helped the researcher obtain in-depth answers or information from key informants and allowed clarification on anything that might arise from a survey method. The interview tool was best used on administrative staff, Uganda Bankers' Association officials, and IT staff.

Data quality control Validity

Validity refers to what an instrument is supposed or meant to measure. Similarly, according to Amin (2005), it is the extent to which a scale measures the concept that it is intended to measure; determined using various methods but the most crucial being via the content validity method (CVI). The Content Validity Index (CVI) reveals the potential of the constructed instrument to remain right and true for the intended study. The researcher determined CVI, after giving the Self-Administered Questionnaire (SAQ) instrument to the research supervisor for rating/judgment and scoring. The number of relevant (n) was then divided by the total number of questions (N) hence the obtained Content Validity Instrument (0.9) was compared with 0.7 as proposed by (Amin,2005) and found to be good hence the researcher continued to use the instrument as it was relevant.

Reliability of instrument

Reliability is a measure of the degree to which an instrument yields consistent results or data every time it is used to measure a trait or concept from the same respondents. Internal consistency technique was used where a fraction of respondents (10 respondents) not part of the study were requested to answer a pre-test questionnaire and thereafter data that was obtained was used to calculate Cronbach alpha (0.82) and compared with 0.7 as proposed by (Amin,2005). The obtained value was greater than 0.7 hence the questionnaire was accepted for collecting data since it was reliable.

Data collection procedures

The researcher obtained a research letter from Team University introducing her to Centenary Bank and specifying that the data needed for the study was solely for study purposes.

Upon obtaining the requisite permission, the researcher proceeded with data collection starting with giving out questionnaires to the Centenary Bank lower bank officials. After that, interviews were conducted with administrative bank staff, BOU staff, and IT staff at Centenary Bank.

Data Analysis**Quantitative data analysis**

The researcher presented data using descriptive and inferential statistics where frequency tabulations were used to present the data on sample characteristics whereas for the research objectives, Pearson correlation and linear regression analysis were used. The researcher used correlation analysis to test the relationship between mobile banking and the profitability of Centenary Bank whereas regression analysis was used in examining the effect of mobile banking and the profitability of Centenary Bank.

Ethical considerations

After the approval of the research proposal by the Research Supervisor and the Research Panel of Team University, an introductory letter was obtained from the University which introduced the Researcher to the

Centenary bank and Uganda Bankers' Association officials that were participating in this study.

Permission to collect data was sought from the Head of Research at Centenary Bank. After getting permission, the selected respondents were contacted and the researcher explained to them the objectives of the study. This was clearly explained to the study participants in the language they understand very well.

Written informed consent forms were supplied to them and confidentiality of all the information about the respondents was communicated and maintained as the information provided was only used for academic purposes.

Results**Demographic characteristics of the respondents**

The researcher used gender, age, marital status, and level of education as demographic characteristics of the respondents and the findings are as in Table 2.

Table 3: Demographic characteristics of the respondents

Characteristic	Frequency	Percent (%)
Gender		
Male	62	65%
Female	34	35%
Total	96	100%
Age (years)		
20-35	34	35%
36-45	43	45%
46-59	19	20%
Total	96	100%
Marital status		
Single (Lower bank officials)	21	22%
Married	69	72%
Separated	5	5%
Widowed	1	1%

Table 4: Demographic characteristics of the respondents

Total	96	100%
Level of education		
Certificate	6	6%
Diploma	26	27%
Bachelors	54	56%
Masters	10	10%
Total	96	100%
Length of service(years)		
0-5	46	48%
6-10 y	48	50%
11+	2	2%
Total	96	100%

Based on the findings of the study on mobile banking and the profitability of commercial banks in Uganda, the following observations were made on respondents.

On gender, the study included 96 participants, out of which 65% were male and 35% were female. It can be inferred that a slightly higher number of males were involved in the study compared to females.

On age, the participants were divided into three age groups: 20-35 years, 36-45 years, and 46-59 years. The largest age group was of the age 36-45 years, accounting for 45% of the total participants. The 20-35 years age group accounted for 35% of the participants, while the 46-59 years age group accounted for 20%.

On marital status, the participants were categorized into four marital status groups: single (lower bank officials), married, separated, and widowed. Among the participants, 72% were married, making it the largest marital status group. The single (lower bank officials) group accounted for 22%, followed by the separated group at 5% and the widowed group at 1%.

On the level of education, the participants had different educational backgrounds, ranging from certificate holders to individuals with master's degrees. Certificate holders accounted for 6% of the participants, followed by diploma

holders at 27%. The majority of the participants, 56%, held a bachelor's degree, while 10% had a master's degree. On length of service in the banking sector, the participants' length of service in the banking industry was divided into three categories: 0-5 years, 6-10 years, and 11+ years. The largest category was 0-5 years, accounting for 48% of the participants. The 6-10 years category accounted for 50% of the participants, while only 2% had been in the industry for 11+ years.

Overall, the study included a mix of participants in terms of gender, age, marital status, level of education, and length of service. These findings provide a diverse perspective on the relationship between mobile banking and the profitability of commercial banks in Uganda.

Mobile bank loans and the profitability of Centenary Bank

To explore the relationship between mobile bank loans and the profitability of Centenary Bank, the researcher used a descriptive analysis of responses that were captured using a Likert 5-point scale where 5- Strongly Agree (SA), 4- Agree (A), 3-Not sure (NS), 2- Disagree (A), 1- Strongly Agree (SD), Mn- Mean, Std-standard deviation

Table 5: Mobile bank loans and the profitability of Centenary Bank

Statements	Mean	Standard deviation
By providing quick and accessible loans through mobile platforms, Centenary Bank attracts a larger customer base and generates more interest income from these loans.	4.2	0.3
Mobile loans are processed and disbursed digitally, resulting in lower administrative and processing costs.	4.7	0.2
Offering mobile loans enhances customer engagement and loyalty by providing a convenient and accessible banking solution for customers' thereby increasing profitability	4.6	0.4
Mobile loans come with higher credit risk as some borrowers may default on their loans hence negatively impacting the bank's profitability	4.4	0.6
Providing mobile loans requires significant investments in technology infrastructure and security measures which impacts the bank's profitability in the short term	4.8	0.7
Centenary Bank faces increased competition in the mobile loan market resulting in lowering interest rates and reduced profitability	4.9	0.1

According to findings in Table 4.4, the majority of respondents agreed (Mean: 4.2, Std: 0.3) that by providing quick and accessible loans through mobile platforms, the bank attracts a larger customer base and generates more interest income from these loans. This suggests that mobile loans are an effective way for the bank to increase its profitability.

Respondents strongly agreed (Mean: 4.7, Std: 0.2) that mobile loans are processed and disbursed digitally, resulting in lower administrative and processing costs. This indicates that the bank can save costs by using digital platforms for loan processing. Similarly, respondents strongly agreed (Mean: 4.6, Std: 0.4) that offering mobile loans enhances customer engagement and loyalty, thereby increasing profitability. This suggests that providing convenient and accessible banking solutions through mobile loans can help the bank retain customers and generate more revenue.

On the other hand, respondents also agreed (Mean: 4.4, Std: 0.6) that mobile loans come with higher credit risk as some borrowers may default on their loans. This

highlights the need for effective risk management measures to mitigate the potential negative impact of loan defaults on the bank's profitability.

Respondents strongly agreed (Mean: 4.8, Std: 0.7) that providing mobile loans requires significant investments in technology infrastructure and security measures. This indicates that the bank may incur initial costs in implementing and maintaining the necessary technology infrastructure and security measures for mobile loans.

Finally, respondents agreed (Mean: 4.9, Std: 0.1) that Centenary Bank faces increased competition in the mobile loan market, resulting in lowering interest rates and reduced profitability. This suggests that the bank may face challenges in maintaining competitive interest rates and profitability in the mobile loan market.

Overall, the findings suggest that while mobile bank loans have various benefits for Centenary Bank, they also pose challenges such as credit risk and increased competition. The bank needs to effectively manage these challenges while leveraging the opportunities offered by mobile loans to maximize profitability.

Discussion

This study documents the relationship between mobile banking loans and the profitability of Centenary Bank's main branch in Kampala Uganda at 45.2%. This finding is below the average. The finding of this study disagrees with the finding of (Momanyi, n.d.) who documented the profitability at 70.7%. The study by Merhi (2019) focuses on the definition and services provided by mobile banking. The definition provided aligns well with the commonly understood concept of mobile banking as the delivery of financial services through mobile devices. Additionally, the study highlights the services typically offered by mobile banking, including mobile bank loans. These services are indeed common features provided by mobile banking platforms globally. However, it is important to note that while the study effectively explains the concept and services of mobile banking, it does not directly address the profitability of commercial banks about mobile banking. This is a significant gap in the study, as the profitability aspect is crucial to understanding the impact and potential of mobile banking on commercial banks.

According to Uwamariya (2020), mobile banking is separated into two categories; additive, where the model uses mobile banking as an extra access channel for existing clients, and transformational is where it is categorized by a new type of services that could attract users from rural areas and poorer segments of the market, and hence can have a transformational effect (Medyawati, Yunanto, & Hagarini, 2021). This way customers can get loans easily electronically using ATMs to provide retail banking services allowing 24, hours a day cash loans, balance verification, and bill payment at branches and remote locations away from branches (Said & Kaplelach, 2019).

The study revealed two categories of mobile banking, namely additive and transformational, and their applicability to commercial banks in Uganda. The additive model suggests that mobile banking serves as an additional channel for existing clients, while the transformational model aims to attract users from rural areas and poorer segments of the market.

One potential advantage of mobile banking, particularly the transformational model, is its potential to increase the reach and accessibility of banking services to underserved populations. By providing banking services to rural communities and lower-income segments, commercial banks in Uganda can tap into new customer bases and expand their market presence. This can result in increased transaction volumes, customer deposits, and ultimately, profitability.

Furthermore, by offering 24-hour loan access, balance verification, and bill payment services, commercial banks can enhance convenience for customers and potentially encourage more frequent use of their services. This can lead to increased customer loyalty and repeat business, ultimately contributing to the profitability of the banks.

In conclusion, mobile banking has the potential to enhance the profitability of commercial banks in Uganda by expanding their customer base, increasing transaction volumes, and improving customer convenience.

However, challenges such as limited mobile device penetration, security risks, and cost considerations need to be carefully addressed to maximize the effectiveness and success of mobile banking initiatives.

Conclusion

It can be concluded that mobile banking activities, including loans have a positive impact on the profitability of Centenary Bank in Uganda. These activities contribute to increased transaction volumes, enhanced efficiency in transaction processing, and lower administrative and processing costs, resulting in improved profitability for the bank. However, there are also limitations associated with mobile banking, such as security risks, credit risk, increased competition, and potential negative effects on fee revenue and customer footfall in physical bank branches. Centenary Bank needs to effectively manage these challenges while leveraging the opportunities offered by mobile banking to maximize profitability.

Recommendation

Centenary Bank should leverage its mobile loan offerings to retain customers and increase profitability. This can be achieved through personalized loan offers, competitive interest rates, and efficient loan processing.

Centenary Bank should continuously monitor the market and adapt its loan offerings and interest rates to remain competitive while ensuring profitability.

Centenary Bank should continuously monitor the market and adapt its loan offerings and interest rates to remain competitive while ensuring profitability.

Acknowledgment

I am privileged and highly delighted to see the true print of my research work. To produce this work has not been simple. I thank God for giving me good health during the process. Many people contributed in various ways including morally, physically, financially, materially, and mentally. Among them, I extend my appreciation to Team University, Kampala particularly the School of Graduate Studies and Research for their input towards this award. My sincere appreciation goes to my family members for contributing financially towards my study, without wish, this work would have probably remained a mere wish. Sincere gratitude is further extended to the Centenary Bank for accepting me to collect relevant data whose value has been unmeasurable towards this research.

List of Abbreviations

BOA Bank of Africa
MFPED Ministry of Finance, Planning and Economic Development
MFT Mobile Fund Transfer
ROA Return on Assets
UBA Uganda Bankers Association
SPSS Special Package for Social Scientists

Source of funding

This study was not funded.

Conflict of interest

The author declares no conflict of interest.

Author Biography

Student of Finance at Tean University.

References

- 1) Ala, M., & Ngugi, P. (2013). Influence of mobile banking on the growth of Micro Finance Institutions in Kenya. *International Journal of Social Science Entrepreneurship*, 1(2), 1-18.
- 2) Amin E. M. (2005). *Social Science Research, Conception, Methodology and Analysis*, Makerere University Press. Kampala.
- 3) Asongu, S. A., & Nwachukwu, J. C. (2016). Mobile phone penetration, mobile banking, and inclusive development in Africa. *African Finance Journal*, 18(1), 34-52.
- 4) Haralayya, B. (2021). How Digital Banking has brought innovative products and services to India. *Journal of Advanced Research in Quality Control Management*, 6(1), 16-18.
- 5) Ismail, T., & Masinge, K. (2012). Mobile banking: Innovation for the poor. *African journal of science, technology, innovation development*, 4(3), 98-127.
- 6) Mawejje, J., & Lakuma, P. (2019). Macroeconomic effects of Mobile money: evidence from Uganda. *Financial Innovation*, 5(1), 1-20.
- 7) Medyawati, H., Yunanto, M., & Hegarini, E. (2021). Financial Technology as Determinants of Bank Profitability. *Journal of Economics, Finance Accounting Studies*, 3(2), 91-100.
- 8) Merhi, M., Hone, K., & Tarhini, A. (2019). A cross-cultural study of the intention to use mobile banking between Lebanese and British consumers: Extending UTAUT2 with security, privacy and trust. *Technology in Society*, 59, 101151.
- 9) Mwange, J. A. (2013). The impact of mobile banking on the financial performance of commercial banks in Kenya. University of Nairobi,
- 10) Nassiwa, J. (2019). Factors affecting adoption of mobile banking in Uganda: A case study of Stanbic Bank, Makerere University Branch. Makerere University,
- 11) Said, F. H., & Kaplelach, S. (2019). Mobile Banking Innovation and Financial Performance of Selected Commercial Banks in Kenya. *Journal of Finance Accounting*, 3(3).
- 12) Simon, V. T., Thomas, A., & Senaji, R. (2016). Effect of electronic banking on customer satisfaction in selected commercial banks, Kenya. *International Academic Journal of Human Resource Business Administration*, 2(2), 41-63.
- 13) Uwamariya, M., Loebbecke, C., & Cremer, S. (2020). Mobile banking impacting the performance of microfinance institutions: A case study from Rwanda. *International Journal of Innovation Technology Management*, 17(01), 2050001.
- 14) Momanyi, D. N. (n.d.). *Effects of Mobile Banking on Profitability of Commercial Banks in Kenya*.

Publisher details:**SJC PUBLISHERS COMPANY LIMITED**

Category: Non-Government & Non-profit Organisation

Contact: +256775434261(WhatsApp)

Email: admin@sjpublisher.org, info@sjpublisher.org or studentsjournal2020@gmail.com

Website: <https://sjpublisher.org>

Location: Wisdom Centre Annex, P.O. BOX. 113407 Wakiso, Uganda, East Africa.