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Mobile Money Usage and Growth of Customers' Deposits in Commercial Banks in Kakoba Division, Mbarara Municipality

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Abstract: **- The study established the effect of Mobile money usage on growth of customers' deposits in commercial banks. The study was guided by four objectives; establishing the mobile money operating cycle, whether mobile money operators have bank accounts for their mobile money businesses, trend of growth of customers' deposits in commercial banks and relationship between mobile money usage and the growth of customers' deposits in commercial banks. The study used a cross sectional research design while collecting data, quantitative and qualitative approaches were used. The study used simple random and stratified sampling methods, while the questionnaire and interview guide were used to collect the data from different respondents, correlation matrix was run in order to establish the relationship between the variables.**

Key words: Mobile money usage, Mobile money operating cycle, Growth of Customers's deposits

I. INTRODUCTION

Mobile financial services are among the promising application in the developing world, mobile money became a general platform that transform entire economies as it is adopted across commerce, health care, agriculture and other sectors (Kevin,2012). Worldwide, more than 50% of mobile money users carry out transactions via a mobile money account and mobile money banking continues to engage consumers by which mobile devices are used to conduct businesses such as banking, payments, bringing new customers and also enabling a more customized experience and services that are more closely tailored to customers' behaviours, however, mobile money is not common in developed markets like Germany, Canada and Europe as their internet infrastructure is strong (Nielsen, 2016).

Mobile money services started in Kenya in 2007 through M-PESA ("M" for mobile, "PESA" for money), a popular mobile money service offered by a local mobile money operator called Safaricom. Since then, the mobile money industry rapidly expanded particularly in developing economies in Africa and South Asia such as India, Bangladesh and Pakistan (GSMA, 2013)

In Africa at least nine markets already have more registered Mobile Money accounts than bank accounts: Cameroon, the Democratic Republic of Congo, Gabon, Kenya, Madagascar, Tanzania, Uganda, Zambia and Zimbabwe. In these markets, the mobile money industry has made financial services more accessible to more people than the traditional banking industry, and all these markets are in Sub-Saharan Africa, a sign of the transformational power of mobile money (MM) in this region, where banking penetration remains very low (Pénicaud & Katakam ,2013)

Haass, Sherri, Pamela (2013), define mobile money as financial transactions that are conducted using a mobile phone, where value is stored virtually (e-money) in an account associated with a SIM card, individuals can deposit cash into a mobile account, make transactions between accounts and withdraw funds as cash, such transactions are compatible with basic phones and do not require internet access.

This study defines mobile money as the term describing electronic financial services performed via a mobile phone. Mobile money is changing economic life people in developing countries, as many people are using cell phones for a range of financial transactions, such as money transfers, mobile banking, and mobile payment (Maria, Nicole &Junior, 2014)

Mobile Money is backed by breakthrough technology that offers a complete end to end customer experience enabling real time transactions and can seamlessly replace cash. Mobile Money is so much more than money on phone, it's a bold and transformative service that has seamlessly integrated the extensive financial services ecosystem and made it accessible through mobile phone (Goudle, 2015).

The study was based on the theory of Financial Intermediation (Gurley & Shaw, 1960). This theory involves deposit mobilization from surplus units of an economy and channeling those funds as loans and advances to the deficit units of the economy. Obamuyi (2013) states that banks must efficiently mobilize more deposits to enable them grant more loans and advances. Previous researchers in the field of deposits, looked at effect of deposit on deposit mobilization (Florence, 2015), effect of deposit mobilization on profitability, role of mobile money services in financial inclusion (Ssonko, 2014), based on financial intermediation,

but they have not investigated to whether mobile money has an effect on growth of customers deposits in commercial banks.

According to Bello (2005), banking system is the backbone of financial intermediation through deposits and channeling of financial resources. Commercial banks as well do depend on customers' deposits to advance loans to its clients. The credit and deposits' growth are very closely related with each other that they represent two sides of the same cone in the balance sheets of banks, banks shrive on their ability to generate income through their lending activities and the lending activity is made possible only if the banks can mobilize enough funds from their customers (Sharma, 2009).

Mohan (2012), Mobilization of deposits is one of the important functions of the banking business and a deposit is an indispensable factor to increase the sources of the bank to serve effectively. The performance of every commercial bank depends on customers' deposits as the deposits are normally considered as a cost-effective source of working fund. Customers' deposits in banks are as essential as oxygen for human being (Deb, K.1988). However, the bank's ability to mobilize enough funds from the public through its current, savings, fixed, recurring accounts and other specialized schemes depends on the systems employed in this highly competitive industry (Digaria, 2011). Mobile money in Uganda was introduced in 2009 and has become popular due to high penetration rates of mobile phone services. It is widely understood that mobile money in Uganda has changed the paradigm of the banking sector tremendously (Oketch, 2015). The growth rate of Mobile Money in Uganda is exceptional given that it started in 1996 while commercial banking operations date back to the 1950's. In fact, over the past decade, far more people in Uganda have gained access to mobile phones than to banking services (Ssoko, 2014). Ndiwalana and Popov (2010) point out, mobile phone payments present a significant opportunity to integrate more mobile money users in Uganda's financial system at a reasonable cost. Mobile money agents are also present in all districts, and 89% of all access points in Uganda are mobile money agents. Despite the coverage of financial services, only 48% of Uganda's adult population has access to formal financial services that enables them to engage in at least a limited range of transactions. Among these, only 16% of the adult populations keep their savings at commercial banks (Sebudde, 2016). Nasikye (2009) the m-banking technology is similar to that of MTN (mobile money) Warid (warid-pesa), Airtel money, Safaricom's MPESA (in Kenya), among others that has made banks uncomfortable given the shift of most transactions from banks to mobile phone kiosks

The study mainly concentrated on effect of mobile money usage on growth of customers' deposits in commercial banks in Uganda. In this study, the effect of mobile money usage on growth of customers' deposits was established. A thorough understanding of the effect mobile money usage on growth of customers' deposits in the commercial banks, policy makers can be helped to design an appropriate strategy to integrate all mobile money services into the banking systems, so as to reach all the under and unbanked citizens.

Mobile Money in Uganda continues to grow significantly with regards to the volume and value of transactions, as well as the number of registered users, the number of registered mobile money telephone lines increased in the year 2015 by 12.2%from 18.8 million in 2014 to 21.1 million in 2015 (Ivan, 2016). The number of mobile money transactions increased by 39.8 % from 496.3 million transactions recorded in 2014 to 693.6 million transactions in 2015 (Bank of Uganda, 2015). However, the deposit growth in commercial banks in Uganda slowed down from 19.5% in year June 2014 to 16.5% in year June 2015, then to 7.5% in 2016 (Bank of Uganda report, 2016). Thus, prompted the researcher to establish the effect of mobile Money usage on deposits growth in commercial banks. The study was carried out in Kakoba Division Mbarara Municipality which is the largest commercial centre of Mbarara municipality. It is also a good representative sample because it has many commercial banks, and many mobile money operators. (Municipal council statistics, 2017).

1.1 Research Objectives

The study was guided by the following questions: -

To establish the mobile money operating cycle in Kakoba division, Mbarara Municipality.

To establish whether mobile money operators have bank accounts for their Mobile Money businesses in commercial banks among Kakoba division, Mbarara Municipality

To establish the trend of customers deposit growth in selected commercial banks in Kakoba division.

1.2 Research Hypotheses(H_1)

There is a relationship between mobile money usage and growth of customers' deposits in commercial banks.

1.3 Significance of the study

The limited information available suggests that four millions of consumers in developing countries use mobile money to access financial services that is to pay and be paid electronically; it also allows unbanked people to use their phones as a bank account: to deposit, withdraw and transfer money, pay bills and goods with their handsets (GSMA, 2011). The mobile industry has increased significantly in size and scope in the last few years and this expansion attracts a wide range of different players seeking a business opportunity and brings mobile money more into the center of attention (GSMA, 2015).Mobile money has been seen as a strong competitor to financial institutions and in this regard mobile phone service providers have taken mobile money services deeper into the financial sector by offering a range of financial services through their networks,(Juniper, 2015).This prompted the researcher to study the effect of mobile money usage on

growth of customers' deposits in commercial banks in Kakoba Division, Mbarara Municipality, Uganda.

II. LITERATURE REVIEW

2.1 Theoretical review

The study is based on the Financial intermediation theory which states that, banks collect deposits and then lend these deposits out, it further states that a true liberalized financial system is the one in which enough deposits are efficiently kept and sufficient loans and advances granted to credit worthy customers coupled with the independence of the financial system from government interference (Gurley & Shaw, 1960). It is important to note that the bank's lending capacity and financial success is largely dependent on its ability to mobilize enough deposits (Carletti, 2004).

According to Bisgimano (1992), financial intermediaries can be distinguished by four features, that is; their main categories of deposits and liabilities are specified at fixed sums and have no correlation to the portfolio performance, the deposits are short-term, the high proportion of liabilities can be withdrawn on demand and finally liabilities are no transferable to third parties, based on that criteria, commercial banks and mobile money operators are financial intermediaries.

The theory is related to the study as it focuses on how commercial banks deliver their services through customers' deposits. A commercial bank mobilizes deposits by use of mobile money to increase financial inclusion and facilitate the transaction even in the areas where a bank is not present. The study is further related to telcom led model, in this model the telecom service providers dominate the mobile money transfer service and handle customer relationships. They are also responsible for providing a network of agents for settlement and payment functions. The banks do not actively participate in mobile services, they rather act as a facilitator in the operation of the telecom model that is payment delivery and settlement. In other words, they operate as back office component holding the aggregate deposit collected by the MNOs (CGAP, 2015)

2.2 The Mobile Money

The definition of "mobile money" varies. It varies across the communication industry as its scope covers a very broad range with overlapping applications. However, there is one condition; the use of mobile phones or mobile devices. (Dermis, 2011; GSMA, 2013). Demombynes and Thegeya (2012) define mobile money as a system of electronic money account that can be accessed by mobile phones. Hope (2012) also defines mobile money as an electronic payment system that enables money transfers to and from an electronic account that can be accessed via an ordinary mobile phone. Likewise, Ndiwalana, Morawczynski and Popov (2011) refers to mobile money as money stored using the subscriber identity module (SIM) card as an identifier as op-posed to an account number in the conventional banking sense. Tobbin (2011) further defines it as including all the various initiatives covering long-distance remittance, micro-payments, and informal air-time bartering schemes aimed at bringing financial services to the unbanked using mobile technology.

Jenkins (2008) simply defines mobile money as money that can be used and accessed via mobile phone. According to Ernest and Young (2010), MM has various synonyms such as "mobile wallet", "mobile financial services" and "mobile payment" which can be defined as a term that describes the services that allow the electronic money transactions over a mobile phone that allow applications such as account access, money transfer and mobile commerce.

In general, mobile money is a term used to describe an electronic wallet service that allows users to store, send, and receive money through their mobile phones.

2.3 Mobile Money Usage

Mobile money offers an efficient, cost effective, convenient and secure channel to make and receive payments and therefore provides a mechanism for bringing the unbanked population into the formal financial system (Bank of Uganda, 2014).

The steady increase in the adoption rate among the mobile phone users and especially among the smart phone users increased the usage rates of mobile payment. In 2011, 12% of mobile phone users and 23% of Smartphone users reported using mobile payments. In 2014, usage of mobile payments had increased to 22% for mobile phone users and to 28% for Smartphone users. In 2015, the usage of mobile payments increased to 24% for mobile phone users while that one of smart phone remained the same at 28 %. (Board of Federal Reserve Systems, 2016).

The adoption of mobile money has continued to increase in the past years. In 2011, 22% of mobile phone users and 43% of Smartphone users reported using mobile banking. In 2014, usage of mobile banking had increased to 39% for mobile phone users and to 52% for Smartphone users. In 2015, the usage of mobile banking increased to 43% for mobile phone users while that one of smart phone increased to S53%. (Board of Federal Reserve Systems, 2016)

Morawczynski (2008), Morawczynski, (2009), Morawcynski and Pickens (2009), assert that Mobile money is predominantly used to transfer money between users without necessarily any accompanying exchange of goods or services. Ali, Olga, Oliver (2011) findings, among the age groups, mobile money users send more than they do receive, with the exception of the 21-30 age group that tend to send (49.1%) and receive (52.6) similarly, and those below 20years of age who tend to receive more (58.3%) than send (27.8%).. The most common usage is to buy airtime from mobile money account, other transactions such as payment of cable television bills, utility bills like Power bills, Water bills, Schools fees and tuition have emerged. (Ali, Olga, Oliver, 2011)

Despite the availability of devices that support mobile money transactions, some customers have not used the mobile money services. Mallat (2007) identify security, privacy, awareness, compatibility and complexity pray a crucial role in mobile banking. Mattila M (2003) asserts that, lack of knowledge and technological skills and culture is also hurdle to the usage of mobile money services. Intermedia (2011) mentioned other factors such network problems, literacy rate and lack of clearly defined policies and laws on electronic Money also limits the usage of mobile money services.

According to Rehman & Esichaikul, (2011), the mobile money usage can be well explained by the use of integrated Technology Acceptance Model (TAM). The Technology Acceptance Model (TAM) is an information systems theory that explains how users come to accept and use a technology. The model suggests that when users are presented with a new technology, a number of factors influence their decision about how and when they will use it. It successfully explored the behavioral intentions as "The degree to which a person has formulated conscious plans to perform or not perform some specified future behavior" (Davis 1989). Davis (1989: 14) proposes an adaptation of the Theory of Reasoned Action (TRA) which is a theoretical model for explaining users' acceptance of a new information technology (IT).

Perceived usefulness (PU) is one of the main constructs of the technology acceptance model TAM in which it is defined as "the degree to which a person believes that using a particular system would enhance his or her job performance". (Davis et al., 1989, p. 320) specified that it the effectiveness at work, productivity understood as time saving and the relative importance of the system for the individual's work. Applying this definition to mobile money adoption; perceived usefulness is the perception of users that mobile money will enhance their means of getting the bank services. It has been noticed that extensive amount of studies about acceptance of new technologies; (Tong, 2010) found that perceived usefulness has an expressive influence on the intention to mobile money usage. Also; (Chen& Barnes, 2007) found that Perceived usefulness is among the very important dimensions that impact consumers' acceptance to new technology.

Perceived ease of use (PEOU) is a critical construct in TAM, defined as "The degree of ease associated with the use of the system". This provides the power to create favorable perceptions, encouraging users to accept and use new systems, (Zacharis, 2012). According to the study by Kazi & Mannan(2013) about behavioral decision making demonstrated that perceived ease of use directly and positively influences the intention to use. Fagan, et al., (2012) explored the adoption of a virtual reality simulation; and found that PEOU of virtual reality crash cart simulation had a positive influence on the behavioral intention to use simulation. Roca, Garcıa and Vega Great (2008) found that perceived ease of use is very critical for the success of an online trading system. Moreover; (Choraria, 2012) considered ease of use is important for the online community users involved in both information search and contribution. PEOU in case of Mobile Money is considered as degree to which Mobile money services are perceived to be easy to access and use.

According to Kesharwani & Bisht (2011) risk perception is the subjective judgment people make about the severity of a risk. Conducting electronic transaction is a risk that faces consumers, as it does not have any kind of physical contact, which subsequently; affects the adoption to mobile technology. In this study Risk is associated with possible losses from mobile money transaction because it concerns a virtual environment with no interaction with employees, not a traditional environment. Broekhuiz and Huizingh (2009) considered the perceived risk to be one of the determinants of the online purchase and they found that it affects the inquirers' purchase to a great extent. Furthermore, studies by Pudaruth & Ramdin (2012) and Nasri (2011) reveal that mobile money adoption in many countries employed risk as one of the key factors influencing adoption to it.

The extent to which mobile money can be utilised to enhance FI has been a focus of various studies such as Chakrabartry (2009), Ndiwalana and Popov (2008) as well as Morawczynski and Pickens (2009). The potential roles for mobile money using mobile phones in Financial Inclusion was still enormous. While mobile phones can play a role in several aspects of FI, their most important contribution appears to be the potential to provide an alternative viable mobile banking that can accommodate low transaction values of money, sustain high transaction volumes at low costs, as well as providing the required convenience, security, and speed (Ndiwalana and Popov, 2008). Mobile phones would bring the unbanked and under-served potential clients and integrate them into the existing banking system.

2.4 Mobile Money Operating cycle

Mobile money services are mostly used by people who do not have personal bank accounts. Indeed, customers often rather use mobile money services, which are available from their mobile phones without the need for a bank account. In practical terms, these two services are accessible from an electronic account, linked to the SIM card in the mobile phone. This electronic account is known as "mobile wallet" and is protected by a personal identification number (PIN), with accounts debited or credited as soon as the transaction takes place. To transact, mobile phone users need to deposit cash into their mobile wallet at the outlet of an agent of a local mobile telecommunications company. The agent will get the money from the customer and transmit it to the company through his/her own mobile phone. If mobile phone users wish to withdraw cash from their mobile wallet, they also need to go to a mobile money agent outlet (GSMA, 2013).

Mobile money services facilitate an exchange between cash and 'e-money', an electronic representation of money. In a mobile money system, an agent acquires a store of e-money, known in the industry as 'the float', by purchasing it from an

MNO, transferring funds from a non-MNO account (say, bank account) to the MNO in exchange for e-money in an account held by the MNO. E-money is, in effect, an electronic voucher for value held by the MNO. When a customer (P) 'cashes in 'with the agent (A), the agent accepts cash (M) in exchange for e-money (e), transferring that e-money from his own float into the customer's account in exchange for the customer's cash. The customer then has e-money in the mobile money system, which she can direct via a series of commands on her phone to be transferred to another customer's (P′) account. The second customer can then visit another agent (A′), who 'cashes out' by taking the customer's e-money, transferring it into his e-money account, and providing an equivalent amount of cash to the customer. The transaction takes the four main steps shown in Figures 1 and 2, two via the mobile network and two in person between customers and agents. First, P gives cash to A (1), who exchanges the cash for e-money (2). P then sends the e-money via the mobile network to P′ (3). P′ goes to A′, who takes her e-money and gives her cash in exchange (4). P2P money transfer is therefore more properly P2A2A2P. A chain of conversions between cash and e-money facilitates this transfer.

1.	$P \rightarrow M \rightarrow A$	(in person)
2.	$A \rightarrow e \rightarrow P$	(mobile network)
3.	$P \rightarrow e' \rightarrow P' \rightarrow e' \rightarrow A'$	(mobile network)
4.	$A' \rightarrow M \rightarrow P'$	(in person)

Journal of the Royal Anthropological Institute (N.S.) 19, 52-74 © Royal Anthropological Institute 2013

The study based on the above process to establish the mobile money operating cycle in kakoba division, Mbarara Municipality,Uganda.

2.5 Whether mobile money operators have bank accounts for their Mobile Money businesses

According to Muhumuza (2015), MM in Uganda is governed by the guideline issued by Bank of Uganda (BOU). The guidelines, among others, require that MM operator must have a financial institution to partner with in the management of MM float. BOU has only allowed MM operations when this is done with a supervised financial institution. MM operators have to hold an escrow account in their partner financial institution, the equivalent in value of all the MM that they have sold to their customers. BOU stated that since it regulates commercial banks, then in principal it is regulating MM operators by default. Kayiwa & Sanya (2015), BOU further pronounced as safe the use of MM for the financial transactions and urged the public to embrace uptake of the electronic commerce platform. However, it is not clearly indicated to whether these mobile money operators do have bank accounts in commercial banks and thus this study was to establish whether the mobile money operators have bank accounts for their mobile money business with commercial banks.

2.6 Growth of Customers' deposits in commercial banks

Customers' deposits consist of money placed into banking institutions for safekeeping. These deposits are made to deposit accounts such as savings accounts, checking accounts and money market accounts and the account holder has the right to withdraw deposited funds, as set forth in the terms and conditions governing the account agreement (Dodd-Frank Wall, 2011).

In Kenya, customers deposits remain the min the main source of funding for the banking sector, in 2013, the total customers deposits amounted to KES 1,488,168 trillion (CBK,2013). The customers deposits have been an upward trend since 2013 to 2016. (CBK,2016)

Bank funding conditions remained stable with deposits contributing 81.8 percent of the total funding of the banking sector, the year-on-year growth rate of deposits in 2015 was 12.1 percent, down from 14.9 percent in 2014, deposits grew by 1.8 percent to Ushs8.52 trillion compared to a growth of 13.8 percent the previous year (BOU, 2015), however, the trend of customers deposits for individual commercial banks was not clearly indicated in bank of Uganda statistics. Therefore, study established the trend of customers' deposit growth in individual commercials banks in kakoba division, Mbarara municipality

2.7 Mobile money usage and growth of customers' deposits

Among the emerging economies where banking infrastructure has not taken deep root, people have taken advantage of the Mobile money services. In the Philippines where the whole concept emerged, Smart Money from Smart Communications (launched May 2003) and G-Cash from Globe Telecom (launched October 2004) are the other pioneer mobile money offerings (Wishart 2006; Mendes, Alampay et al. 2007). While they do not have many documented user studies, the two offerings have been an invaluable learning ground for other mobile money implementations around the world, showing us the contrast between different models of collaboration that can exist between the two critical sectors of banking and telecommunications. Mobile money offers millions of people a potential solution in emerging markets that have access to a cell phone yet remain excluded from the financial mainstream. It can make basic financial services more accessible by minimizing time and distance to the nearest retail bank branches (CGAP, 2006) as well as reducing the bank 's own overheads and transaction- related costs. Mobile money presents an opportunity for financial institutions to extend banking services to new customers thereby increasing their market (Lee, Lee and Kim, 2007).

Simpson (2002) suggests that mobile money is driven largely by the prospects of operating costs minimization and operating revenues maximization. Furst et al (2002) also examine the determinants of mobile money adoption and observe that more profitable banks adopt mobile money services and are performing well with all their clients at their

conveniences. Jayawardhena and Foley (2000) show that Mobile money services like mobile banking results in cost and efficiency gains for banks yet very few banks are using it.

Mobile Phones offer the possibility of revolutionizing the traditional labour intensive banking model into a more agile, robust, and cost effective capable of delivering small transactions that the low-income groups, that the local financial institutions will be impacted if their architecture is not modeled to meet the diverse financial needs as it easy with mobile money for low income groups to transferring funds and borrows well as making deposits in a safe convenient place(Elizabeth,2008).

In recent years, banks, payment system providers, and mobile operators have begun experimenting with branchless banking models which reduce costs by taking small value transactions out of banking halls into local retail shops, where agents such as airtime vendors, gas stations, and shopkeepers, register new accounts, accept client deposits, process transfers, and issue withdrawals using a client's mobile phone then communicate transaction information back to the telecommunication provider or bank. This enables clients to send and receive electronic money wherever they have cell coverage. They need to visit a retail agent only for transactions that involve depositing or withdrawing cash (Salzaman, Palen& Harper, 2001).

Transactions Over the Counter (TOC) are losing ground as transactions via mobile money accounts are outpacing the number of transactions happening over the counter in banks (Elisa,2016). According to Sanya(2015), statistics show that the number of MM account holders in Uganda has grown to 18,489,989 over the last six years which is much higher than the traditional bank account holders. Maria Kiwanuka, former Finance Minister said that by December 2014, there were about 18.5 million mobile money accounts from a mere 10,011 accounts in March 2009. In monetary value, she said over Shs. 18 trillion was transacted. The existing Literature does not show clearly whether increase mobile money usage has a significant effect on growth of customers deposits in commercial banks.

III. CONCEPTUAL FRAMEWORK, EFFECT OF MOBILE MONEY USAGE AND GROWTH OF CUSTOMERS' DEPOSITS

The study considered mobile money as independent variable, growth of customers' deposits as dependent variable.

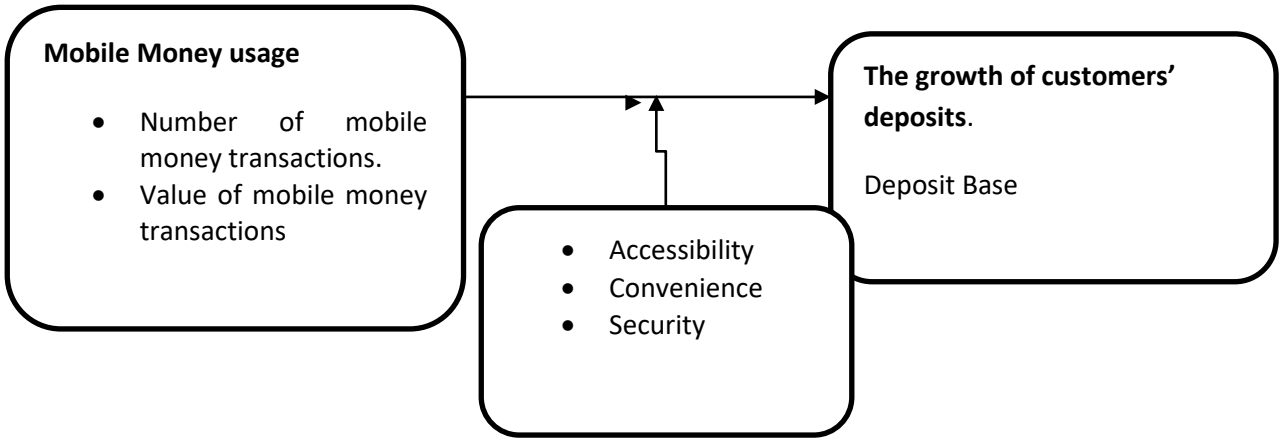


Fig.1.8. Conceptual Framework

Source: *Carletti 2004, Ali, Olga & Oliver2011*

IV. RESEARCH METHODOLOGY

The research design was cross sectional because it provides a systematic description that is as factual and as accurate as possible. The study used both quantitative and qualitative research approaches. The quantitative and qualitative data was collected using questionnaires, documentary review check list and interview guide respectively. The study population was 162 respondents where by, 150 were licensed mobile money operators and 12 managers of commercial banks in Kakoba division (Mbarara Municipal Council statistics, 2017). The commercial banks included, Barclays Bank, Bank of Africa, Centenary Bank, GT bank, DT bank, UBA, DFCU bank and Finance Trust bank, Bank of Baroda, Eco bank, Equity bank and Housing Finance bank. Mobile money operators included grade one and grade two mobile money agents. (Mbarara Municipal Council statistics, 2017). The study considered the sample size of 113 respondents, that is, 103 were mobile money operators and 10 were commercial banks in Kakoba division and the sample size was determined using Krejcie and Morgan Statistical table, (1970). Simple random sampling was used to select commercial banks and then the branch managers from selected commercial banks were purposively sampled for face to face interviews about the variables under study. The study also used the cluster sampling to select mobile money operators. The researcher grouped the mobile money operators into two clusters, one cluster included grade

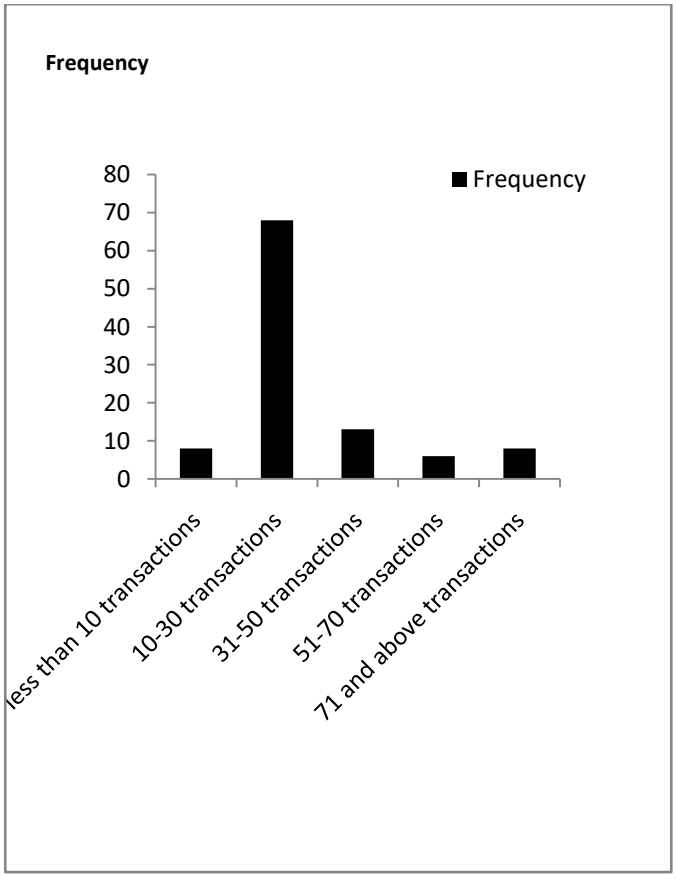
one mobile and another cluster included grade two mobile money operators. Regression analysis and correlation matrix were used in order to establish the relationship among the variables under study (Mugenda, 1999). All these were determined using the SPSS version 21 computer package and the data was presented in form of graphs and tables.

V. FINDINGS

5.1 Mobile Money operating cycle

The first objective was to establish the mobile money operating cycle as stated in the chapter one of this report. In order to establish the mobile money operating cycle, respondents were asked about; the number of mobile money lines, the number of mobile money transactions, the value of mobile money transactions, source of mobile money float and how float is turned into cash.

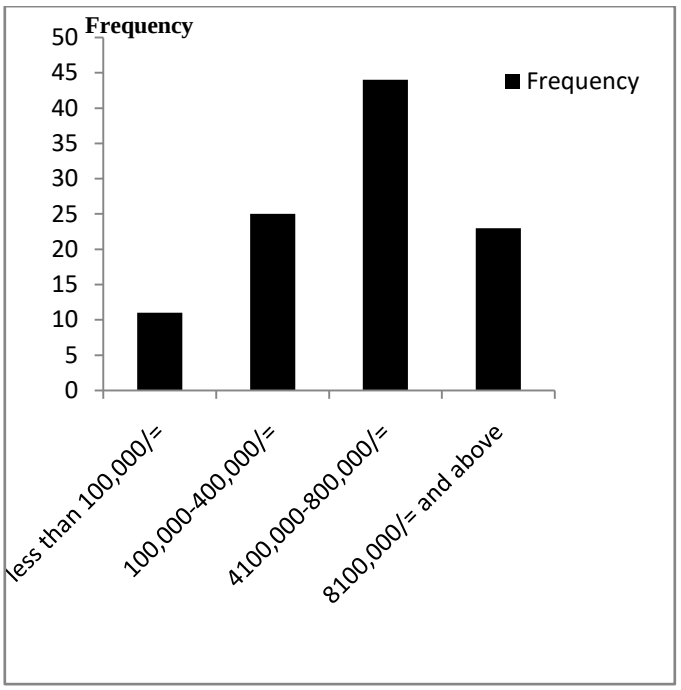
Fig.1 The number of transactions made on a daily basis



Source: Primary Data, 2017

On the number of transactions made on a daily basis, 7.8% of the respondents mentioned less than 10transactions,66% mentioned 10-30 transactions, 12.6% mentioned 31-50 transactions, 5.8% mentioned 51-70 transactions, and 7.8% mentioned 71 transactions and above. This implies that mobile money operators make a big number of transactions and it explains the amount of money moved through mobile money operators.

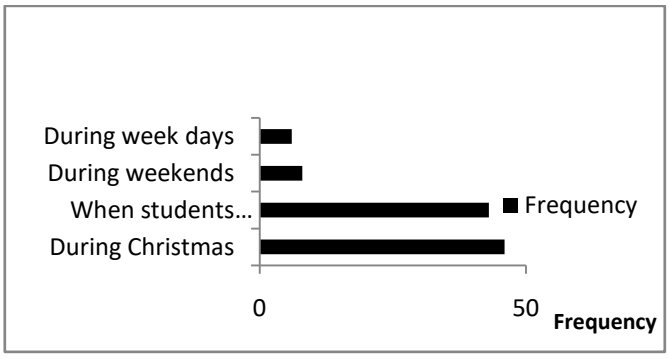
Fig.2 The average value of transactions on a daily basis



Source: Primary data, 2017

On the average value of transactions on a daily basis, 10% cited less than 100,000, 24% mentioned between 100,000-400,000, 43% cited between 410,000-800000, and 22.5% mentioned 810000 and above. Such findings bring out the income generated from mobile money business and explain the amount of money moved through the mobile money operators.

Fig.3 The Period for more transactions

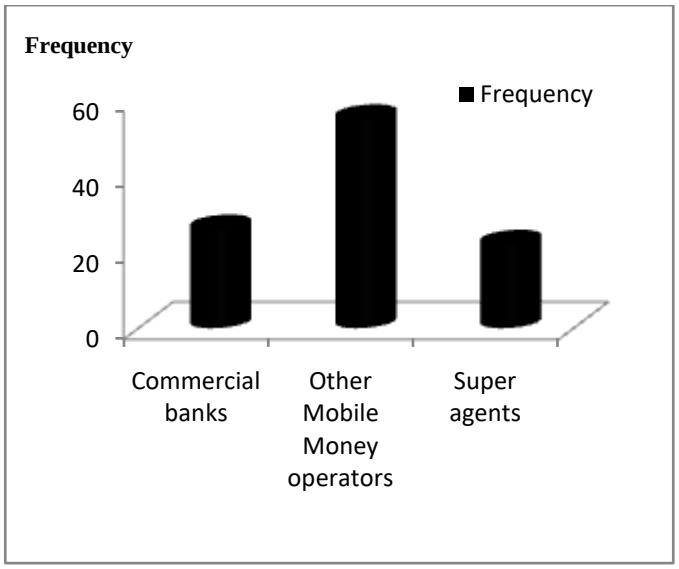


Source: Primary Data, 2017

Figure 4.9, shows the period for more transactions, where the majority of the respondents 44.6% believed that transactions are many when students are going back to schools, 41.7% mentioned that there are many during weekdays, 7.8% mentioned during Christmas seasons and 5.8% mentioned during weekends. This implies that most of the mobile money transactions are made during Christmas and the time when children are going back to the school, and it also explains the time when commercial banks lose out some customer deposits

to mobile money operators. This is in line with the statement made by most of bank mangers that, "*towards weekend and Christmas people tend to withdraw money from their bank accounts and it is more likely such money is deposited on the mobile money accounts for shopping while they are in villages, in such way we lose some deposits"*

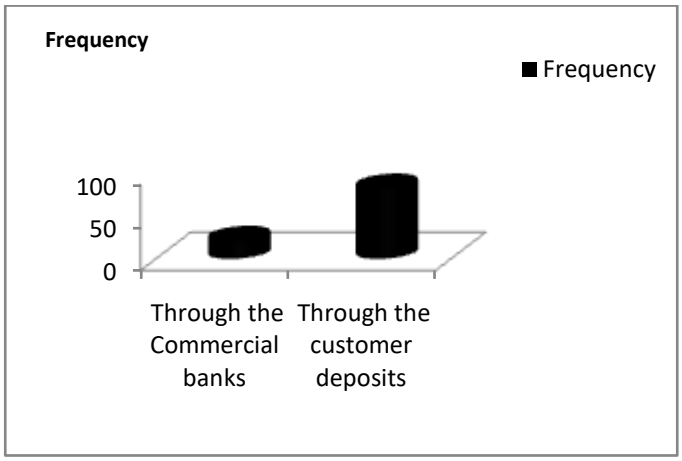
Fig. 4 Sources of mobile money float



Source: Primary date, 2017

Respondents were asked about the sources of mobile money float, 25.5% mentioned commercial banks, 53% mentioned other mobile money operators, and 21% mentioned super agents. This finding agrees with the statement made by most of bank managers during face to face interviews that, "*yes, some mobile money operators buy float from us especially those who need bigger float".* This implies that mobile money operators that want small amount of float can buy it from fellow mobile operators and those that want bigger amount of float buy from the commercial banks. It further explains the starting point of mobile money operating cycle.

Fig. 5 How mobile money float is turned into Cash



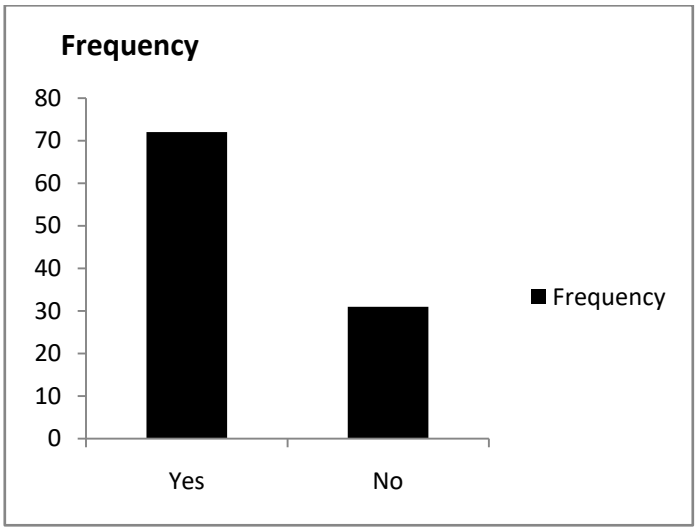
Source: Primary data, 2017

When asked about how mobile money float is turned into Cash, majority of the respondents 80% mentioned that it is done through customer deposits, and 20% mentioned through the commercial bank. This is in line with the statement made by most of the bank managers that, ""*yes, some mobile money operators sell float to us in order to get cash especially those that need a bigger amount of cash or have a bigger amount of float on their business mobile money line".* This implies that mobile money operators that have less float, cannot be exchanged through customer deposits to get cash, and those with bigger amount of float which cannot be exhausted through customer deposits, it is sold to commercial banks for cash.

5.2 Whether mobile money operators have bank accounts for their mobile business in commercial banks in Kakoba division.

The third objective of the study was to establish whether mobile money operators have bank accounts in commercial banks. To achieve the objective, the respondents were asked whether they have bank account(s) for their mobile money business in any financial institution, and the frequency of transacting with the bank account.

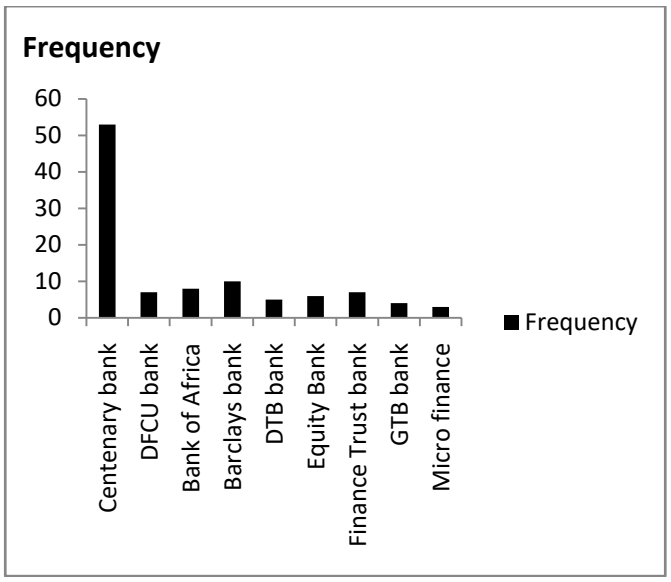
Fig.6 Whether mobile money operators have bank accounts for their mobile money business



Source: Primary data, 2017

On whether mobile money operators have bank accounts for their mobile money business, 70% believed in the statement whereas 30% did not believe in the statement. This implies that most of mobile money operators do have bank accounts for their mobile money businesses and it could explain end point of mobile money. This is in line with the statement made by most of bank managers that, "*some mobile money operators do have accounts with us especially super agents who always have a lot of cash"* and *"such agents help us in mobilizing deposits even from non-bank customers or unbanked"*

Fig.7 The banks in which mobile money operators have accounts



Source: Primary data, 2017

Respondents were asked about the banks in which bank accounts for their mobile money businesses. According to the findings, 51% mentioned Centenary bank, 6.7% cited DFCU bank, 9.7% mentioned Barclays bank, 7.8% mentioned Bank of Africa, and 4.8% mentioned DTB bank, 5.8% of respondents mentioned Equity bank, 6.7% mentioned Finance Trust, 3.8% mentioned GTB bank and 2.9% of respondents mentioned Microfinance This implies that most mobile money operators do have bank accounts for their mobile money businesses in commercial banks in Kakoba division.

5.3 The trend of customers deposits in selected commercial banks in Kakoba Division

The researcher reviewed financial Statements of selected commercial banks with aim of establishing the trend of customers' deposits from 2013-2016.

Table 1:The trend of customers deposits in selected commercial banks in Kakoba Division

Bank	2016 Shs (000)	%	2015 Shs(000)	%	2014 Shs (000)	%	2013 Shs (000)
Bank of Africa	480,248,308	11	433,372,120	5.5	410,732,210	8	380,327,120
Equity Bank	424,443,219	-11	476,715,809	65	289,457,034	10	261,957,034
Centenary Bank	162,614,165	4	156,195,877	6	146,591,787	11	132,196,867
DT Bank	1,116,175,335	1	1,102,313,872	5	1,048,446,632	**	**********
DFCU Bank	1,134,731,000	24	914,951,000	-8	993,713,000	9	913,173,000
Housing Bank	430,813,634	22	353,061,996	15	306,000,781	2	300,001,817
UBA Bank	140,067,161	61	86,479,452	-28	120,684,109	-17	145,700,533
ECO Bank	213,900,293	3	207,469,363	5	197,870,617	63	120,870,612
GT Bank	99,956,338	56	63,785,431	19	53,675,134	3	51,675,431
Finance Trust Bank	101,870,641	7	95,001,566	21	78,419,204	**	*********

********** No data provided.

Source: Secondary data, Commercial Banks' Financial Statements.

Findings shows that, there has been a positive trend in customers' deposits in all commercial banks that were selected in the study, with exception of few declines in customer deposit growth for example in Equity bank, DFCU bank and UBA bank. This finding is line with the statements made by managers that, "*the customers' deposits have been on a positive trend "*, some bank managers stated that, *"the growth customers deposits has been on a positive trend with exception of some few declines caused by factors like competition from other financial institutions".*

5.4 The relationship between the mobile money usage and customers 'deposit growth in commercial bank.

In order to establish the relationship between the mobile money usage and customers' deposit growth in commercial banks, the study conducted a correlation and regression analysis. The findings were as shown in the table 4.2 and 4.3.

Table 2: Correlation matrix

	Variables	1	2	3	4	5
1	Number of MM transactions	1.000				
2	Value of MM transactions	.3245**	1.000			
3	Customer deposit base	.3123**	.2421**	1.000		
4	Accessibility and convenience	.3131*	.3011*	.3211*	1.000	
5	Security	.1012*	.1131*	.3224**	.1131	1.000

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

** Correlation is significant at the 0.05 level (1-tailed)

The findings analysed show that there is a weak positive relationship between mobile money usage and customers' deposit growth in terms of deposit base (r= .3123, .2421, p-value <0.01 for number of MM transactions and value of MM transactions respectively. This implies that mobile money is contributing positively to the growth of customers' deposits. This is line with statement made by most bank managers that, "*mobile money transactions have a positive effect with our customers deposits since these mobile money operators collect cash from individuals that do not have bank accounts us and then deposit that to their business bank account, though the magnitude of effect is small"*.

5.4.1 Regression analysis

The study considered a regression analysis in order to establish the extent to which the mobile money usage influences the growth of customers' deposits in commercial banks. Coefficient of determination explains the extent to which changes in the dependent variable (growth of deposits) can be explained by the change in the independent variables or the percentage of variation in the dependent variable (growth of deposits) that is explained by all the two independent variables (Monthly value moved, number of mobile money transactions).

Table 3: Regression analysis

Model	**Coefficients of Determination**		**T**	**P**
	B	Std. Error		
(Constant)	26.123	1.947		1.000
Number of mobile money transactions	.012	.394	.030	.008
The value of mobile money transactions moved	.118	2.108	.056	.005

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	**F**	**Sig**
1	.608[a]	.370	.260	.587	.006
	a. Predictors: (Constant), the value transactions moved, number of mobile money transactions				

The researcher conducted a regression analysis so as to determine the relationship between mobile money and growth of deposits in commercial banks in Kakoba division. According to the regression analysis, taking all factors (number of mobile money transactions and total value transactions moved through mobile money) constant at zero, the growth of customers deposits is 26.123%. The data findings analyzed also shows that taking the independent variable at zero, a unit increase in number of mobile money transactions increases customers' deposits by 0.012 times. A unit increase in the amount of money moved through mobile money operator increases customers deposits by 0.118 times. This not with standing, the study shows that there is a positive significant relationship between mobile money usage and growth of customers' deposits in commercial banks in Kakoba division, Mbarara Municipality.

The two independent variables that were studied, explain only 37% of the changes in the growth of customers' deposits in commercial banks as represented by the R2. The study shows that there is a weak positive significant relationship between mobile money usage and growth of customer deposits in commercial banks in Kakoba division, Mbarara Municipality. The findings are line with statement made by most of bank managers that, *"….to the some extent, it is seen as a complement to commercial bank transactions since the end of day the amount of money collected by mobile money operators is brought to the bank……"*

Therefore, it can be deduced that mobile money usage has a positive effect on the growth of customers' deposits in commercial banks.

VI. DISCUSSION OF FINDINGS

6.1 The mobile money operating cycle

On the number of lines being used, majority of mobile money operators (84.5%) mentioned that they were using two lines. This was because customers use mobile money services in consideration of many factors including convenience, availability of network, and charges. This implies that most mobile business operators rely on more than one mobile network operator. Also, on the mobile money line used for mobile money business, the findings show that MTN and Airtel are the commonest lines used for most mobile money operators in mobile money business. Such finding implies that these are the best mobile network operators that have reliable, convenient, accessible and viable network for mobile money business.

Most of mobile money transactions were between 10-30 transactions and the value of such transactions was between shillings 410,000-800,000 on daily basis. This shows that a lot of money is being moved through mobile money operators. About the sources of mobile money float, respondents cited commercial banks (25.5%) and other mobile money operators (53%) as a major source of mobile money float. The findings further revealed that mobile money float is turned into cash through the customer deposits (80%) and sometimes through the commercial banks (20%), while findings from interviews revealed that those that buy float from commercial banks or buy cash from the commercial banks, they are those operators (super agents) with a lot of float or cash that cannot be changed through other mobile money operators.

The Findings revealed that majority of mobile money operators (70%) have bank accounts in commercial banks among Kakoba division. These accounts are held in different banks including Centenary bank, DFCU bank, Barclays bank, Bank of Africa, Equity bank, GTB, DTB, and Finance Trust bank. Respondents further revealed that they more often do transact with their bank accounts and also, they do deposit

money for mobile money. Also, interviews revealed that some mobile money operators have bank accounts for their mobile money businesses; and this contributes to the deposit mobilization hence growth of customers' deposits.

The findings of study can be compared with Bello (2005) who stated that banking system is the backbone of financial intermediation through deposits and channeling of financial resources. The credit and deposits' growth are very closely related with each other that they represent two sides of the same cone in the balance sheets of banks, banks shrive on their ability to generate income through their lending activities and the lending activity is made possible only if the banks can mobilize enough funds from their customers.

Also, the findings of the study relate with Mohan (2012) who stated that mobilization of deposits is one of the important functions of the banking business and a deposit is an indispensable factor to increase the sources of the bank to serve effectively and Customers' deposits in banks are as essential as oxygen for human being.

6.2 The trend of customers deposit growth in selected commercial banks in Kakoba Division

The finding of the study established the trend of deposit growth in commercial banks. Respondents mentioned that they use bank accounts where they deposit money for their mobile money business. The savings accrue as a result of deposits from mobile money operators which predicts a positive shift in the trend of customers deposits growth in banks, however this is different from the Bank of Uganda report where the findings revealed that the growth of customers deposits was a negative shift from19.5% in 2015 to 7.5% in 2016 (BOU report, 2016), this could be due to a general view made on commercial banks in Uganda. This study was carried out on individual commercial banks in Kakoba divison and customers' deposits were reviewed in each selected commercial bank, the findings revealed a positive growth in customers deposits in most of commercial banks. The findings from interview further revealed a positive trend on growth of customers' deposits, where the managers stated that mobile money complements in deposit mobilization because mobile money operators deposit money from mobile money business in commercial banks hence increase in deposits.

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

6.3 The relationship between the mobile money usage and customers 'deposit growth in commercial bank

The study established the relationship between the mobile money usage and customers 'deposit growth in commercial banks. Findings indicate that mobile money usage has an effect on the growth of customers' deposits in commercial banks. This is well explained by correlation and regression analysed results where by r= .3123, .2421, p-value <0.01and it shows a weak positive relationship between mobile money usage and growth of customers' deposits. In addition, the R squared value was 37% showing the extent to which mobile money usage affects the growth of customers' deposit. Furthermore, the interviews conducted, the bank managers revealed that to some extent mobile money usage influences growth of customers' deposits.

VII. CONCLUSIONS

The study was about mobile money usage and customers 'deposits' growth in selected commercial banks in Kakoba division, Mbarara municipality. All the objectives of the study were achieved.

From the findings, the researcher concludes that;

7.1 The mobile money operating cycle in kakoba division

The process of mobile money starts from the bank when the mobile money operator buys float which is sold to mobile money users in form of deposits to get cash and this cash is deposited to the bank or it is sold to the bank for float.



7.2 Whether mobile money operators have bank accounts for their mobile money business

Most of the mobile money operators in Kakoba division do have bank accounts for their mobile money businesses in most of commercial banks in Kakoba division, and this shows that mobile money operators do mobiles deposits for commercial banks from both unbanked and under banked customers hence promoting financial inclusion.

7.3 The trend of customers deposits in selected commercial banks in Kakoba Division

There has been a positive trend in customers' deposits growth in most of selected commercial banks since 2013-2016.

7.4 The relationship between the mobile money usage and customers 'deposit growth in commercial bank.

There is a weak positive relationship between mobile money usage and customers deposit growth in commercial banks. It can be inferred that the mobile money usage has slightly contributed positively to the increase in customers' deposits in commercial banks. The interface between mobile money operators and commercial banks has proven to be of great use in increasing customer deposits in commercial banks in Kakoba division.

VIII. RECOMMENDATIONS

Basing on the study findings, the following recommendations are forwarded;

The banks should collaborate with all Mobile Network Operators (MNOs) to come up with the best strategies to control money that is held in circulation by mobile money operators.

The Bank of Uganda should not generalize the deposit growth of commercial banks as some commercial banks do have a positive trend of customers deposit growth.

The bank should conduct research on other possible mobile money services packages that are user friendly and develop them so as to enable deposit/withdraw of money using mobile phone which will meet different customer requirements.

Agency banking should take a centre point in commercial banks, short term strategic plans to deepen deposit mobilization to insure inclusion of under and unbanked.

IX. AREA OF FURTHER STUDY

There is a need to investigate on the other factors that influence customer deposit growth other than mobile money usage in commercial banks.

The study should also be conducted on the mobile money business and incomes of financial institutions.

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