MOBILE MONEY SERVICES AND THE FINANCIAL PERFORMANCE

OF COMMERCIAL BANKS IN UGANDA;

A CASE OF CENTENARY BANK, MAPEERA BRANCH

BY

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DECLARATION

I, OKELLO ANDREW REG NO. 1153-05194-00254, hereby declare to the best of my knowledge that this work is purely my own effort and has never been submitted in any university around the globe for any award with the help of my senior supervisor Mr. Okello Moses.

Sign …………………………………..

OKELLO ANDREW

Date… 30/07/2018 …

APPROVAL

This report written by Okello Andrew which was carried out on the effects of Mobile Money Services on the Financial Performance of Commercial bank a case of Centenary bank Mapeera branch I guided him in writing this report and am satisfied that this report should be submitted as a partial fulfillment for the award of Bachelors of Science in Statistics at Kampala International University.

Sign ....

MR. Okello Moses

Date........... 03 / 08 / 2018 ·

DEDICATION

This report is dedicated to my family, my friends, and my supervisor.

Also to those who believed me and encouraged me that I can make it despite all the challenges and hardships that were on my way.

ACKNOWLEDGEMENT

ABSTRACT

The purpose of this study was to determine the effect of use of mobile money services on the financial performance in centenary bank Uganda. It was guided by three objectives; (i) to determine the level of use of mobile money services in the banking industry in Uganda, (ii) to establish the level of financial performance in the banking industry in Uganda and (iii) to establish the relationship between the use of mobile money services and financial performance in the banking industry. The study applied both qualitative and quantitative research approaches mainly descriptive correlation design. The target population was workers in centenary bank Mapeera. A sample of 52 respondents was chosen using simple random and purposive sampling techniques. Data were collected using self-administered questionnaires (SAQ) and analyzed using SPSS statistical packages. The findings of study were presented in form of means, standard deviations, Pearson's linear correlation coefficient and linear regression analysis. According to the findings of the study, it was indicated that there is generally a high level of use of mobile money services in the banking industry observed from a high level of reliability and accessibility to the services (means of 3.71 and 4.17 simultaneously). The findings also indicated that there is a high level of financial performance reflected by a high level of profitability (mean=4.52) in the banking industry, a high level of loan supervision (mean=3.85) and relatively high revenue sources (mean=4.11) for the banks. It was also indicated that there is an insignificant relationship between mobile money services use and financial performance in terms of profitability of banking industry (sig. value=0.212). It was also indicated that there is an insignificant relationship between mobile money services use and loan supervision of banking industry (sig. value=0.605). Finally, it also indicated that there an insignificant relationship between mobile money services use and revenue of banking industry (sig. value=0.435). The study thus concluded that banks in Uganda should adopt the use of mobile money services as it is highly reliable, accessible and reduces congestion in bank premises by customers who come to make transactions. This will help to boost financial performance in the banking industry.

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LIST OF ACRONYMS/ ABBREVIATION

BOU	Bank of Uganda
CAMEL	Capital Adequacy
	Asset Quality
	Management Soundness
	Earnings and Profitability
	Liquidity
	Sensitivity to Market Risk
M-PESA	Mobile PESA
M-	Commerce Mobile Commerce
MTM	Mobile Transfer Money
MNOs	Mobile Network Operators
SIM	Subscriber Identity Module
UAE	United Arab Emirates
U.S	United States
SAQ	Self-Administered Questionnaires
GDP	Growth Domestic Product
ROA	Return on Assets
ROE	Return on Equity
NIM	Net Interest Margin
EVA	Economic Value added
MMS	Mobile Money Services

CHAPTER ONE

1.0 Introduction

This chapter covers the background to the problem, statement of the problem, research objectives and research questions that underpin the problem, the scope, and significance of the study and limitations of the study.

1.1 Background to the problem

In trying to achieve high levels of performance, Commercial Banks have undergone a number of challenges. Financial innovation in banking has been a relevant topic since mid '70s.

Nowadays, also due to the present financial system situation, it comes to further relevance. Despite the relevance of financial innovation and ever changing world, it's hard to list all financial innovations specifically. Adequate performance of financial institutions is of crucial importance to their customers. Commercial banks like many other financial service industries, facing a rapidly changing market, new technologies, economic uncertainties, competition and demanding customers have created an unprecedented set of challenges (Lovelock, 2001)

Banks operate in a complex, competitive and highly regulated environment, with low margins and high customer expectations. To manage this rapidly changing economic and regulatory system, banks need a reliable way of financial innovation with concrete actions that lead to measurable results. To increase their revenue and profits banks must improve their performance.

Mobile money

Mobile Money services refers to use of mobile phone (mobile phone money services) and internet banking to conduct financial transactions such as sending and receiving money, paying for goods or services, purchasing airtime, remittances, accessing bank accounts to make deposits or withdrawals, viewing financial statements for bank accounts and/ or mobile money and any other closely related service (Desils, 2012).

Mobile money services continued to register significant growth in the year to June 2017. This growth was propelled by the services' convenience. Besides being an avenue for money remittance and bills payments, mobile money has revolutionized the banking sector complementing the banks' operations. Notably, banks' customers are using mobile money to

transfer funds between their bank and mobile money accounts. They can save and borrow through the mobile money accounts. The number of mobile money transactions increased from 809.1 million in the year to June 2016 to 1.1 trillion during the year to June 2017. The corresponding increase in the value of mobile money transaction was from UGX37.4 trillion to UGX52.8 trillion. The number of registered mobile money users increased from 19.6 million to 22.8 million during the period (BOU, 2017).

Must and Ludewig (2010) trace the rise of mobile money to the rapid and worldwide penetration of mobile phones back to 1999. However, mobile phone enabled commerce (m-commerce) or services may have started as early as 1997 when mobile phone enabled Coco Cola vending machines and mobile phone banking services were introduced in Finland. Jenny & Isaac (2010) concentrated on Africa and they explored the history of mobile money services in different countries. Jack and Suri (2011) researched on the effect of reduced transaction costs and effect on household consumption in Kenya complementing the earlier research findings from Hughes and Lonie (2007). This data revealed that research on mobile money globally, regionally and locally is recent due to novelty of this technology.

The financial performance is a combination of financial and performance. The financial is relating to money and management of money and the concept performance is derived from the term "parfourmen", which means "to do", "to carry out" or "to render". It refers to the act of performance, execution, accomplishment, fulfillment, etc. In wider sense, performance refers to the accomplishment of a given task measured against present standards of accuracy, completeness, cost and speed.

According to Robert Albans, "The word performance is used to mean the efforts extended to achieve the targets efficiently and effectively. The achievement of targets involves the integrated use of human, financial and natural resources."

In the words of Erich L. Kohlar, "The performance is a general term applied to a part or to all the conducts of activities of an organization over a period of time; often with reference to past or projected costs efficiency, management responsibility or accountability or the like."

Financial performance is the level of performance of a firm over a specific period of time and expressed in terms of the overall profits or losses incurred over the specific period under evaluation (Bodie, Kane and Marcus, 2005).

Financial soundness is a situation where depositor's funds are safe in a stable banking system. The financial soundness of a financial institution may be strong or unsatisfactory varying from one bank to another (BOU, 2002). External factors such as deregulation; lack of information among bank customers; homogeneity of the bank business, connections among banks do cause bank failure. Some useful measures of financial performance which is the alternative term as financial soundness are coined into what is referred to as CAMEL. The acronym "CAMEL" refers to the five components of a bank's condition that are assessed: Capital adequacy, Asset quality, Management, Earnings, and Liquidity. A sixth component, a bank's Sensitivity to market risk, was added in 1997; hence the acronym was changed to CAMELS. (Note that the bulk of the academic literature is based on pre -1997 data and is thus based on CAMEL ratings.) Ratings are assigned for each component in addition to the overall rating of a bank's financial condition (Jose, 1999).

In Uganda, emergence of mobile banking places demand on any commercial bank to apply any skill necessary to remain competitive and achieve competitive advantages (Mbogo, 2010).The banking industry has already been depicted as exhibiting little market orientation and fulfilling services with little regard to customer needs as well as including branches dissimilar in efficiency which have contributed to low financial performance.

Meanwhile, the global banking landscape has shifted enormously over nearly a decade since the 2008 financial crisis. "The most dramatic change in the post-crisis global financial system has been in cross-border lending," according to McKinsey Global Institute. Cross-border capital flows, including foreign direct investment, have shrunk by 65% since 2007.

Large European banks—particularly those in the eurozone—is leading a retreat from foreign markets, while banks from Japan, China and Canada are increasing their foreign presence, new research from McKinsey says. China's four largest banks have increased foreign lending more than tenfold, from $86 billion in 2007 to $1 trillion in 2016. "And China's foreign bank lending could continue to grow: Foreign assets are only 9% of total bank assets in China, compared to

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20% or more for banks in advanced economies," according to The New Dynamics of Financial Globalization, a report by a team led by Susan Lund, economist and partner at McKinsey & Company (Global Finance Magazine, Oct, 2017).

Financial globalization is arguably healthier than it was pre- crisis, but banks and regulators must remain vigilant and continue to adapt, the McKinsey report says. "In the future, digital platforms, blockchain and machine learning may transform financial markets and create new channels for cross-border capital flows," it adds. "These technologies are enabling faster, lower-cost and more efficient international transactions, and will further broaden participation in global finance to more firms, investors and countries" (Global Finance Magazine, Oct, 2017).

Justin Bisseker, European banks analyst at Schroders, says regulatory headwinds are abating, and may even turn into tailwinds, led by the US. "The majority of banks have now rebuilt capital to levels that incorporate a reasonable buffer against the unexpected," he says. "However, the capacity of banks to continue to build capital—and thereby fund growth, pay dividends, absorb unanticipated shocks and accommodate regulator pressure—varies markedly" (Global Finance Magazine, Oct, 2017)

More than a quarter of European banks is at high risk of failure and need to find new business models, according to a report by Bain & Company. "European banks as a whole are running hard just to stand still," says Bain partner João Soares, author of the report. "Sure, in light of the higher capital buffers they have erected, the banks might appear to be fairly resilient when viewed through recent stress tests by regulators," he says. "But in reality, reflections on average for European banks are next to useless in a continent of many distinct markets" (Global Finance Magazine, Oct, 2017).

Uganda's commercial banks seem to be laying down new strategies as the industry anticipates recording subdued earnings in 2016 owed to low private sector credit and declining yields from government securities amidst easing of monetary policy.

Available data show that the Bank of Uganda (BoU) lowered the central bank rate from 11.5% in February to 9.5% in December, 2017, the lowest ever since the Central Bank embraced the inflation targeting regime four years ago, to tame inflation and stimulate economic activities (Justine Bagyenda, 2017).

As a result, interest rates dropped from an average of 24 % to 18.9% but the private sector shied away from borrowing - the main source of revenue for banks and other financial institutions. Instead, the industry's non-performing loans hit a record high of 7.2% as at the end of September 30, up from 6.2% as at the end of June 30, according to Bank of Uganda statistics.

Justine Bagyenda, the executive director at the BoU told the Independent during the release of this month's monetary policy on Dec.18 that they acknowledge the challenge facing the industry saying credit risk has been a major highlight in banking in 2017 as evidenced with the surge in Non-Performing Loans (2017).

"I am (therefore) not going to say that the bank's profitability is going to be better this year compared to last year because as you can see, the credit risk drives down profitability for the banks," she said, adding, " I don't want to speculate on general performance for 2017 until we get the numbers of the entire year" (Justine Bagyenda, 2017).

Amidst development, customers still opt for mobile money as a substitute to commercial banking (Higgins, Kendall & Lyon, 2012), a factor that may take a great toll on the performance of commercial banks. Mbogo (2010) further notes that mobile money service is affordable and accessible to both high and low income earners thus being preferable. Banks like Centenary bank have come up with innovations to partner rather that compete with mobile services offering companies, an arrangement called Cente Mobile (Bank of Uganda Annual Report, 2014).

Centenary bank is a large financial services provider in Uganda. It is primarily involved in the promotion of development through loans to rural farmers, processors of agricultural produce, small traders, small manufacturers, importers, and exporters. While engaged in all areas of commercial banking, the bank has a significant portion of its portfolio in the microfinance arena in an attempt to meet the needs of the many individuals and business entities with limited means. As of December 2016, the bank's assets were UGX: 2,315,749,000,000 (US$626.784 million), with shareholders' equity of UGX: 485 billion (US$131.3 million) (Fabian Kasi, managing director, 2017).

1.2 Statement of the problem

The increased use of mobile money services have led to financial inclusion of many clients formerly excluded from mainstream banking (BOU, 2015).Following this, Banks like Centenary bank are leveraging on platforms of telecom companies to deliver mobile banking services through telephone banking platform called Cente-Mobile which has created a good banking acreage for both the bank and its customers as the bank continues to enhance its e-banking platforms. The fusion of Cente-Mobile with MTN and Airtel Mobile money not only solidifies offerings through the platform, but also improves accessibility of financial services to over 19 million customers who subscribe to MTN, Airtel and the bank (Fabian Kasi, 2015). This however, comes with mixed results for instance in the bank had Mobile e-banking of 7.26 million Ugx compared with 9.97 million Ugx In 2013 which is declining.

The decline in interest margins during the last decade has changed the traditional role of banks and forced them to search for new sources of revenue. In this context, Elsas et al. (2010) find that, initially, commercial banks typically increase diversification by moving into fee-based businesses. Then they expand their business into trading activities or by underwriting insurance contracts. As stated the effect of diversification of income on bank profitability is not clear. Recently, both Chiorazzo et al. (2008) and Elsas et al. (2010) conclude that revenue diversification enhances bank profitability via higher margins from non-interest businesses. However, many previous studies (Acharya et al., 2002; DeLong, 2001; DeYoung and Rice, 2004; Morgan and Katherine, 2003; Stiroh, 2004; and Stiroh and Rumble, 2006; among others) show that greater diversification of the banking business does not necessarily translate into an improvement of the bank's profitability; it may, in fact, be detrimental to profitability. A reduction of the interest rates applied to certain loans with the object of capturing customers for other products and services offered by the bank could cause such a detriment; i. e., the profit on those other activities may not be enough to compensate for the interest reduction (Lepetit et al., 2008).

It is not clear whether mobile money services will serve to enhance the bank's financial performance or will lower it as a result of customers opting for mobile money as a cheaper and a faster option .This necessitates a study to establish whether or not mobile money will serve to improve or reduce the financial performance of Centenary bank.

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1.3 Purpose of the study

The purpose of this study is to assess the effect of the use of mobile money services on financial performance of Centenary bank in Uganda.

1.4 Research objectives

The study objectives included the following;

i. To examine the different mobile money services available in the banking industry of Uganda.
ii. To assess the measures of financial performance in the banking in industry.
iii. To establish the relationship between mobile money services and financial performance of commercial banks.

1.5 Research questions

The research questions included the following;

i. What are the mobile money services available in the banking industry of Uganda?
ii. What are the measures of financial performance in the banking industry?
iii. What is the relationship between mobile money services and financial performance of commercial banks?

1.6 Scope of the study

The scope of the study included the subject scope, geographical scope and time scope.

1.6.1 Content scope

The scope of the study focused on how mobile money services impacted on financial performance of commercial banks.

1.6.2 Geographical scope

The study focused on centenary bank Mapeera branch since it has mobile banking which closely relates with mobile money and the use of telephones for banking.

1.6.3 Time scope

The study covered the time period of three years from 2016 to 2018. This is the period when there is increased use of mobile money services and mobile banking thus creating possibilities of mobile money to be affecting financial performance of commercial banks.

1.6.4 Theoretical scope

The study will review the various theories related to mobile money and financial innovation and will help guide the study. The theories will include Diffusion theory which seeks to establish why financial innovation evolution has led to improved financial efficiency. Silber's constraints theory of Innovation shows attempts by profit maximizing firms to reduce the impact of various types of constraints that reduces profitability.

1.7 Significance of the study

The study findings may help policy makers at the national level to set policies that will help improve financial performance of the banking sector.

This study may also be helpful to Centenary Bank as it will allow for better collaboration with mobile money service offering companies to establish best working relationships.

The study findings may also provide learning points to all commercial banks mobile money services offering companies to establish how they can survive symbiotically and in a complimentary way rather than competing.

The study may also be used as reference to academicians and other interested persons who will need to understand more about mobile money services on financial performance of commercial banks.

1.8 Definition of key words

Commercial banks: used according to the common usage of banks to mean institutions in

Uganda that provides financial services, such as accepting deposits, giving business loans, mortgage lending, and basic investment products like savings accounts.

Mobile Money: refers to use of mobile phones (mobile phone money services) to conduct financial transactions such as sending and receiving money, paying for goods or services, purchasing airtime, remittances, accessing bank accounts to make deposits or withdrawals, viewing financial statements for bank accounts and/or mobile money and any other closely related service. It is therefore related to a combination of mobile telephones and financial services as adopted by World Bank (2010) to conduct financial transactions as outlined above.

Mobile Commerce (m-Commerce): is limited to the use of mobile money functions available to purchase or sell goods in SMEs business transactions. This concept has been applied according to the definition by Must & Ludewig (2010).

Profitability

Profitability is the ability of a business to earn a profit. A profit is what is left of the revenue a business generates after it pays all expenses directly related to the generation of the revenue, such as producing a product, and other expenses related to the conduct of the business activities. There are many different ways of analyzing profitability. This focuses on profitability ratios, which are a measure of the business' ability to generate revenue compared to the amount of expenses it incurs (Shawn Grimsley).

Loans

The advance of a specified sum of money to a person or business (the borrower) by other persons or businesses, or more particularly by a specialist financial institution (the lender), which makes its profits from the interest charged on loans. The provision of loans by commercial banks, finance houses, building societies, etc., is an important source of credit in the economy, serving to underpin a substantial amount of spending on current consumption and the acquisition of personal and business assets.

Loans may be advanced on an unsecured or secured basis; in the latter case the lender requires the borrower to offer some form of collateral security (for example, property deeds) which the lender may retain in the event of the borrower defaulting on the repayment of the loan. See bank loan, installment credit, mortgage, loan capital, debenture, loan guarantee scheme, interest rate, soft loan, and bond. (Collins, 2005)

Revenue

The inflow of assets that results from sales of goods and services and earnings from dividends, interest, and rent. Revenue is often received in the form of cash but also may be in the form of receivables to be turned into cash at a later date (Houghton Mifflin).

1.9 Conceptual Framework of the study

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┌─────────────────────────┐                              ┌──────────────────────────┐
│  Mobile Money Services  │─────────────────────┐       │  financial performance   │
└─────────────────────────┘                     │  ▲    └──────────────────────────┘
            │                                    │                   ▲
            │                                    │                   │
            ▼                                    │                   │
┌─────────────────────────┐     ┌───────────────────────────┐  ┌────────────────────────┐
│ -Financial accessibility │    │ Intervening variables      │  │ Profitability          │
│                          │───▶│───────────────────────────│─▶│                        │
│ - Reliability            │    │ Mobile Money regulations   │  │ Loans                  │
│                          │    │ Operator support condition │  │                        │
└─────────────────────────┘    └───────────────────────────┘  │ Revenue                │
                                                                └────────────────────────┘
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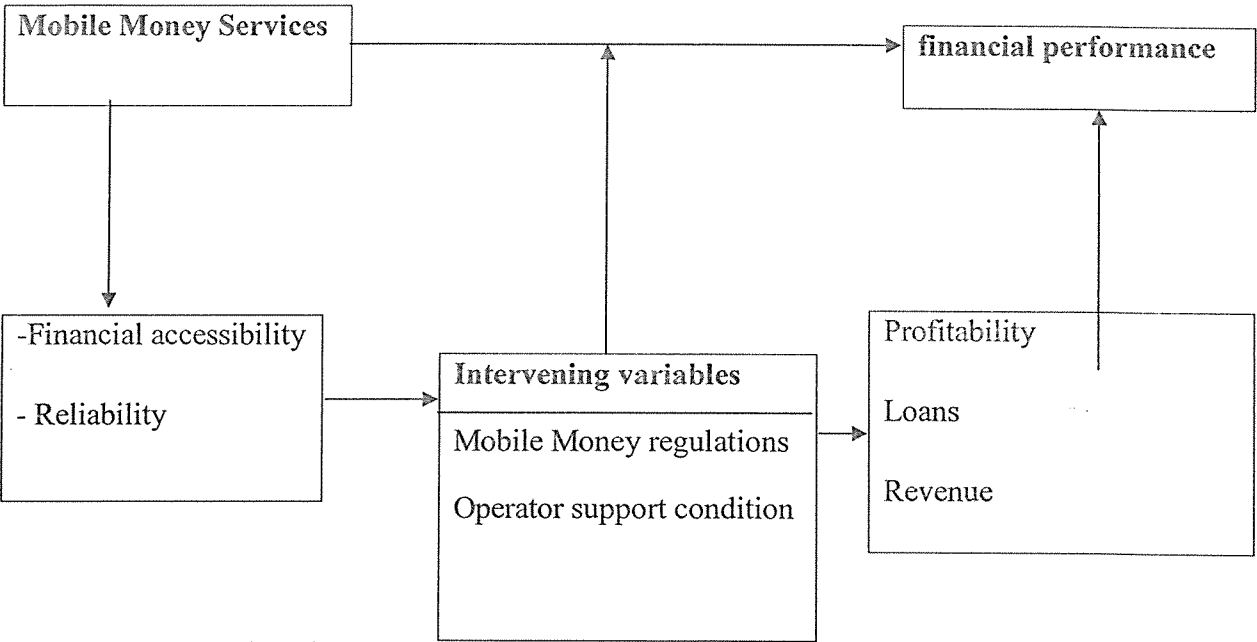
Source: Developed by researcher from several literature, 2018.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter covers the review of literature on bank performance, the different mobile money services available in Uganda, the measures of financial performance in the banking industry and the relationship between mobile money services and financial performance of commercial banks.

2.1.1 Theoretical Review

This section reviews the various theories related to mobile money and financial innovation and will help guide the study. The theories will include Diffusion theory which seeks to establish why financial innovation evolution has led to improved financial efficiency. Silber's constraints theory of Innovation shows attempts by profit maximizing firms to reduce the impact of various types of constraints that reduces profitability. The third theory to review will be Kanes' theory of innovation which deals with reduction of potential risk to minimum, response to financial costs created by changes and improving performance to attract customers despite the regulative burden.

Studies on the performance of banks started in the early 1980s with the application of two industrial organizations models: the market power and Efficiency structure theories (Anthanasoglou et al. 2006). The balanced portfolio theory has also added greater insights into the study of bank profitability (Nzongang & Atemnkeng 2006)

2.1.2 Diffusion Theory

Rogers (2003) defined diffusion as the process by which an innovation is communicated through certain channels over time among the members of a social system. Rogers' theory of diffusion contains four elements that are present in the diffusion of innovation process.

The first is innovation which he defines as an idea, practice, or object that is perceived as new by an individual or other unit of adoption. The other is communication channel which is the means by which messages get from one individual to another.

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instrument from another country and thirdly as the mixture of the ways above, taking the form of modification of an existing instrument. The importance of Silber's theory is that, by using the concept of financial innovation, he provides us with a wider spectrum of potential reason contributing to the innovating process that helps to improve the performance of financial institutions. The suggestion in the work of Silber, is that investment in innovation is a rational response to an unfavorable competitive position (Silber, 1983)

2.1.4 Kane's theory of Innovation

Kane (1984) sees financial innovation as an institutional response to financial costs created by changes in technology, market need, and political forces, particularly laws and regulations. Financial industry is special, it has stricter regulations and financial institutions have to deal with these regulations in order to reduce the potential risks to minimum. Kane's theory where an institution responds to the changes in its operating environment is the rise of the shadow banking system in the US Economics believes the current financial current crisis was triggered by the shadow banking system. Because shadow banking institutions don't receive traditional deposits like a depository bank, they have escaped most regulatory limits and laws imposed on the traditional banking system. Members are able to operate without being subjected to regulatory oversight for unregulated activities.

An example of an unregulated activity is a credit default swap (CDS). This parallel banking system essentially caused the credit market to freeze, due to lack of liquidity in the banking system. These entities which make up the shadow banking system include hedge funds, ''borrowed short term in the liquid market and then purchased long term, illiquid risky assets''. Banks cannot operate in such a manner but since the existing legislation were only designed to regulate banks; investment vehicles like hedge funds came up with risky innovative technique in a bid to minimize their operational cost.

Kane approaches innovation as an arbitrage instrument trying to take advantage of regulation lags. Innovation takes the form of product substitution in order to circumvent regulation sometimes by just rearranging contracts and by just simply moving along different financial systems. He defines regulation's burden as a form of taxation imposed on banks. Banks' main concern during the 1970s was to avoid it. In order to attract customers despite the regulative

burden, they used a mixture of means initially covering non-monetary benefits to indirect benefits and at the end mainly monetary advantages.

But on the other hand regulators developed their own defenses and adopted new approaches resulting in the emergence (Kane 1984).His contribution is essential for the better understanding of the existence of dialectic between financial institutions (banks) and exogenous factors that leads to permanent evolution under the process of financial innovation.

2.2 Different mobile money services available in Uganda

Mobile money services have been defined as electronic money accounts that can be accessed via mobile phone (Zutt, 2010). Mobile money services offers secure and convenient means for banked and unbanked people to send and receive money with mobile phones at home and abroad anywhere at any time. It contains features such as mobile wallet, mobile transfer, airtime transfers and mobile banking. Mobile wallet enables the subscriber to receive, store, send or pay money anywhere any time. Money transfer options means that one can send money from their mobile money account to a different subscriber anywhere any time, which is similar to airtime transfer, where one can purchase and send airtime to another subscriber within the same network. Mobile banking works closely with banks to provide banking services to subscribers of mobile money (Zutt, 2010)

Use of mobile phone for financial transaction started with introduction of prepaid mobile phone services that targeted low income earners who desired more anonymity than post-paid phone subscribers. Unlike post-paid mobile phone services, prepaid subscribers could simply walk to a shop, purchase small denomination airtime, key in the details and make their desired call. This segment of mobile phone users soon became large enough to be a target for micro-payment features since majority had little or absolutely no interaction with banks. The main reason this segment came into focus and the need to develop financial services that targeted them was outlined by Ellot (2014), as part of the drive towards a cashless transaction environment that presents advantages such as: reduction of fraud, reduction of untraceable criminal activities, and reduction of cash handling cost, and less reliance on cash-in-hand when a need arose.

Must and Ludewig (2010) trace the rise of mobile money and to the rapid and worldwide penetration of mobile phones back to 1999. However, mobile phone enabled commerce (m-

commerce) or services may have started as early as 1997 when mobile phone enabled Coco Cola vending machines and mobile phone banking services were introduced in Finland. Ellot (2014) outlined African networks that provided mobile enabled commerce (m-commerce) which included MTM banking, Celpay, Fundamo and M-pesa but the list has grown significantly since then. MTM banking was collaboration between South Africa Standard Bank and mobile operator MTM. Celpay was a system developed by Celtel and First Rand Bank of South Africa. Fundamo was an m-commerce software provider in South Africa.

Mobile subscribers continue to increase as competition improves amongst the five Mobile Network Operators-MTN Uganda, Orange Uganda, Uganda Telecom, Warid Telecom and Airtel Uganda. There are now about 9.9 million mobile phone subscribers across all Mobile Network Operators. About 0.6 million of these coming in the first quarter of 2010 and helping and helping to raise mobile network penetration to 31.4 lines per person compared to a national tele-density of 32.2 lines across the whole telecommunication sector. Network traffic is still largely dominated by voice, with in-network traffic (local to Mobile Network Operator's network) still most prevalent thanks to the success of promotions like Warid's Pakalast and Pepeya (Warid Telecom, 2010); Zain's kika and Orange's Gyekiri (Orange Uganda, 2010) that allow unlimited calling within networks for defined periods (that range from an hour to a week) on payment of a fixed fee (Uganda Government, 2010).

SMS usage grew by 28% in first quarter 2010to about 176 million massages (compared to 138 million in fourth quarter 2009) as Mobile Network Operators encourage use through campaigns and innovative services like missed call alerts, call me back, and so on that tend to be free. Mobile internet access has grown thanks to increasing competition in data services amongst Mobile Network Operators. The arrival of cheaper bandwidth via undersea cables coupled with increasing 3G-network coverage is driving down the cost of data services. In addition, Mobile Network Operators have partnered with social networking sites like facebook to provide free mobile access (Uganda Government, 2010).

M-Pesa from safaricom (an affiliate of Vodafone) in Kenya is arguably the most famous mobile money implementation at the moment (Morawezynski and Pickens, 2009). While M-pesa was not the first (launched March 2007) large-scale implementation, its rapid uptake is perhaps what differentiate it from Smart money or G-Cash from the Philippines (Wishart 2006; Mendes,

Alampay, 2007). Morawezynski and her colleagues have extensively studied M-pesa (Hughes and Lonie 2007; Morawezynski 2009), which is predominantly used for domestic money transfer between different parts of the country (Pickens, 2009). International money transfers as well as linkage with Equity bank to provide Mkesho –a bank account that links to M-pesa enabling users to transfer money between the two (Equity bank 2010) are some of the new features. They also noticed an interesting trend of users beginning to leverage M-pesa as a savings vehicle (Morawezynski, 2009). Vodafone has since been replicated M-pesa in Afghanistan, Tanzania and more recently in South Africa.

Smart Money from Smart Communications (launched May 2003) and G-Cash from Globe Telecom (launched October 2004) in the Philippines are the other pioneer mobile money offerings (Wishart 2011, Mendes, 2011). 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. The unique role of international remittances within the context of the Philippines also greatly influenced their development, forcing them to explore international partnerships that allowed money inflows that were later widely distributed domestically. On the domestic front, G-Cash has collaborated with the rural areas on the Philippines (Aampay, 2011).

Wizzit in South Africa stands out amongst other mobile money offerings because of its independence from any MNO, allowing it to freely operate across all networks like Smart Money, it also coupled with a bank account and debit card, enabling the service to easily leverage existing financial infrastructure like ATMs and bank branches in addition to Wizzit agents. Ivatury and Pickens undertook a study of 215 Wizzit users and found that while indeed many had low incomes, they were much better off than the average poor in South Africa and tended to be more technology savvy (Ivatury and Pickens 2009).

2.2.1 Mobile payments

Mobile payments are alternative payment methods that are made using a mobile device, i.e. mobile phones. All mobile payment and money transfer methods described in this thesis requires a mobile phone. Mobile payments are categorized in various ways. They can be categorized into micro and macro-payments. Micro-payments typically cover payments less than 10 Euros.

Mobile payments are also categorized into mobile proximity payments, mobile remote payments and person-to-person payments (Laaksonen 2008 and Mallat et al. 2004). Proximity payments take place at point-of-sale (POS). In some situations mobile remote payments and person-to-person (P2P) payments are classified as mobile money transfer (MMT) services (Goeke et al. 2010).

Mobile payment services require the co-operation of many different stakeholders. These stakeholders include mobile network operators, mobile handset manufacturers, financial sector and institutions, customers, government, software providers, service providers and merchants (Karnouskos 2004). The challenge with mobile payments is that all of these players (excluding customers and government) have to agree on the distribution of the financial profits. This is typically a very slow process. (Salonen et al. 2010; Dahlberg et al. 2008). It is also yet unclear that who will actually run the mobile payment service of the future (Leinonen, 2008).

2.2.2 Mobile person-to-person payments

Mobile person-to-person payments (P2P), sometimes referred to as customer-to-customer (C2C) payments (e.g. Goeke 2010; Pousttchi 2008), are mobile money service transfers that are made using mobile phones. Mobile P2P payments can either be mobile proximity payments or mobile remote payments. In this thesis mobile P2P payments are described as payments or money transfers that are made using a mobile phone to other private persons. These can include friends and family members or when for example paying to a babysitter or a seller at a flea market. Services that support mobile P2P remote payments in developing countries are usually referred as mobile money transfer (MMT) services (e.g. M-Pesa, Airtel Money, MTN mobile money). For example in the case of M-Pesa the most popular use-case is to send money to relatives (Morawezynski et al. 2009). NACHA (The Electronic Payments Association) and eCom Advisors (2010) found out in their research that sending money to children, and sending money out the country to a family member, friend or relatives would be the most likely use cases for P2P payment service in USA. From the user's perspective the term 'money transfer' may describe such use-cases better than the term 'payment'.

2.2.3 PayPal

PayPal is the most popular online payment mobile money service at the moment. PayPal users can pay and send money to each other or pay in various online shops. PayPal users can deposit money to their PayPal accounts from their bank account or link their credit cards to the account. Basically PayPal offers its users a way to pay globally without the fear of exposing bank or credit card information to the payee. PayPal has become extremely popular in different online auctions where person-to-person payments are needed. In order to receive money, the recipient has to register to a PayPal account. PayPal's application also allows users to make payment requests to others.

PayPal is a worldwide service that can be accessed from basically anywhere in the world. Money needs to be deposited to a PayPal account from bank account or credit card. However most people in developing countries do not have a bank account or a credit card that makes PayPal is better suitable for developed countries (Chiai et al. 2009). Initially PayPal was designed for payments between unfamiliar persons and to small businesses that do not accept credit cards, internet, but can also be used by special programs called clients downloaded to the mobile device (Al-Jabri, 2012).

2.3   Measures of financial performance in the banking industry

The banking sectors performance is professed as the replica of economic activities performed in an economy. Sound financial health of a bank provides the assurance not only to its depositors but is equally significant for its stakeholders and economy as a whole. Therefore, efforts have been made by financial analysts and economists at regular intervals to analyze the financial strength and performance of the banks and manage it accordingly (Athansasoglou, 2012).

The CAMELS model is very much popular among regulators due to its effectiveness. Gaytan and Johnson (2012), argued that this model is highly compatible for the assessment of the performance of a bank. Veni (2014) found that CAMELS methodology was adopted by North America Bank regulators to judge the financial and managerial reliability of commercial lending institutions. This model assesses the overall condition of the bank, its strength and weaknesses. (Avkiran, 2010), emphasized the importance of the CAMEL model in examining the overall performance of the bank.

Dahiyat (2012) examined each parameter of CAMELs system (Capital adequacy, asset quality, management quality, earning, liquidity and sensitivity to market risks) by conducting literatures and empirical studies, and relying on interviews with responsible persons in Jordan securities commission and brokerage firms. Ahmed (2012), described the CAMELS rating system used by bank examiners and regulators, and finds that banks with high efficiency scores also have strong CAMELS ratings. Veni (2014) attempted CAMEL rating system to analyze the problems faced by the banks and analyze the comparative analysis of the performance of various banks.

Capital Adequacy; Focuses on the total position of bank capital and protects the depositors from the potential shocks of loses that a bank incurs (Gaytan, 2012).

Asset Quality; According to Johnson (2012), the composition of all commercial banks shows the concentration of loans and advances in total assets. The high concentration of loans and advances indicates vulnerability of assets to credit risk, especially since the portion of non-performing assets is significant.

Management soundness; Sound management is the most important pre-requisite for the strength and growth of any financial institution. Since indicators of Management quality are primarily specific to individual institution (Gaytan and Johnson, 2012).

Earnings and profitability; Strong earnings and profitability profile of a bank reflects its ability to support present and future operation. More specifically, this determines the capacity to absorb losses by building an adequate capital base, finance its expansion and pay adequate dividends to its share holders (Veni, 2011).

Liquidity; Liquidity indicators measured as percentage of demand and time liabilities (excluding inter-bank items) of the banks (Verma, 2011).

Sensitivity to market risk; to assess the degree to which a bank might be exposed to adverse financial market conditions (Avkiran, 2012).

Grier (2007), recommended that management is considered to be the single most important element in the CAMEL rating system because it plays a significant role in bank's success. Muhammad (2011) in his study claimed that the strength of CAMEL's factor is responsible for the overall strength of the bank. In an empirical study, Bernanke (2007) observed that U.S.

Federal Reserve investigated the safety and soundness of financial stability in banks through the on-site bank examination with the support of the CAMEL rating model. Veni (2014) highlighted the importance of capital adequacy requirement and the measure adopted by banks to build up their capital ratios.

Gupta and Kaur (2008) in their study used CAMEL model for the assessment of the performance of Indian private sector banks and ranked the top five and bottom five banks. Al-Tamimi (2010) using the rating model investigated factors influencing the performance of Islamic and conventional banks in (UAE) during 1996 to 2008. The study revealed that liquidity and concentration were crucial determinants of the performance of conventional banks while cost and number of branches significantly influenced the performance of Islamic banks.

Generally, the financial performance of banks and other financial institutions has been measured using a combination of financial ratios analysis, benchmarking, measuring performance against budget or a mix of these methodologies (Avkiran, 2010). Simply stated much of the current bank performance literature describes the objective of financial organizations as that of earning acceptable returns and minimizing the risks taken to earn this return (Bosi, 2011), showed in their study that most previous studies concerning company performance evaluation focus merely on operational efficiency and operational effectiveness, which might directly influence the survival of a company.

By using an innovative two-stage data envelopment analysis model in their study, the empirical result of this study is that a company with better efficiency does not always means that it has better effectiveness. Elizabeth and Ellot (2014) indicated that all financial performance measure as interest margin, return on assets, and capital adequacy are positively correlated with customer service quality scores. Avkiran (2012), discussed the development and performance of domestic and foreign banks in Arab gulf countries, and showed that local and foreign banks in these countries have performed well over the past several years. Moreover, he added that banks in these economies are well capitalized and the banking sector is well developed with intense competition among the banks.

Generally, the concept of efficiency can be regarded as the relationship between outputs of a system and the corresponding inputs used in their production. Within the financial efficiency

literature, efficiency is treated as a relative measure, which reflects the deviations from maximum attainable output for a given level of input (Ali and Akram, 2011). However, there have been numerous studies analyzed the efficiency of financial institutions. Among these (Muhammad, 2011) use data envelopment analysis to analyze technical efficiency in US banking into pure technical and scale efficiency.

2.4 Relationship between the use of Mobile Money and Financial Performance of Commercial Banks.

Mobile banking has transformed the way people in the developing world transfer money and it is poised to offer more sophisticated banking services which could make a real difference to people's lives. Banks play a very important role in the economy. More precisely, banks have a two-fold role to fulfill:

i.   Accept deposits and make investments on behalf of investors, and

ii.   Bank liabilities, or claims on said deposits, facilitate exchange with other parties (Bodla, 2011).

These two basic functions apart, putting money in a bank almost eliminates the risk that it will get lost or stolen. The importance of agents having access to banking services (broadly, financial services) has been emphasized repeatedly in the literature, across various strands of economics. This in essence serves to promote performance of commercial banks.

In the case of Uganda, in order for a partnership to exist between mobile money operators and the bank, there must be an agreement between the financial institution and the mobile money operator. This agreement provides for the establishment of an escrow account in the financial institution where money is deposited before creation of e-value. Safeguarding customers' virtual money which they purchase with cash from mobile money agents has been the BOU's main concern (BOU, 2015). The BOU has only allowed mobile money operations when this is done in partnership with a supervised financial institution, the equivalent in value of all the mobile money that they have sold to their customers. This means that the mobile phone operators, which are not licensed financial institutions, cannot themselves intermediate the funds that they have mobilized through the scale of mobile money. The parties must be able to reconcile the balances

of the escrow account and the mobile money accounts. All this could serve to promote the bank indirectly (BOU, 2015).

Needs for payment and transactional services are not always well served by conventional banks since they do not always find it easy or cost effective to adopt a full-feature package for banking services (Higgins, Kendal & Lyon, 2012). Mobile money transfer services can be used to raise efficiency and boost business growth through cheap, efficient and reliable money service support systems that reduce the need for cash transaction and the risks associated. Literature reveals that the mobile money transfer service is faster, cheaper, more reliable, and safer (Veni, 2014). The benefits of cashless transaction including less opportunity for fraudulent and criminal activities, and mobile money technology Higgins (2012), have increased adoption rates, (Mbogo, 2010).

Mobile banking offers banks several opportunities for increasing revenues. These include monetizing the value of customer analytics, delivering greater real-time access to products and services, and conducting targeted marketing campaigns based upon the knowledge of consumer preferences that banks collect. Past investigations on branchless banking have acknowledged the important role that mobile phones play in some models (Ivatury & Mas 2008, Lyman, et. Al 2008). They are consistent with the promise seen in electronic money bringing improved efficiencies and reducing transaction costs. Theoretically Mobile money services are expected to have a positive effect on financial performance, as mobile banking services results in more profits for the banks through commission incomes as well as gradual reduction in overhead expenses (particularly staff and marketing).   In Kenya, Ndung'u (2011) concurs that mobile banking has revolutionalised the money transfer business and has created further innovations that have lowered the transaction costs for both the banks and customers. This transformation of money transfer business has translated to more incomes and profits to the banks. This confirms why Uganda has appeared in the global map in the front of mobile money transfer services. Due to the potential in mobile banking, the model has been replicated in other countries and seems to be a threat to the traditional money transfers services like the cheque system. Many retail transactions in Uganda have moved to the mobile phone. Bank customers can move money from their bank accounts to their e-money accounts or from their e-money to their bank accounts. This improvement of the mobile money services has increase the velocity and circulation of money in the country and has resulted to more profits for the banks through commission incomes.

Financial institutions which have had difficulty providing profitable services through traditional channels to poor clients see Mobile banking /Mobile payments as a form of branchless banking which lowers the cost of serving low income customers (Ivatury & Mas, 2008). Today Mobile money services are viewed as the 'fifth channel' of banking such that it has become a channel of its own and not an appendage of online banking hence a greater integration with back end core banking system.

2.5 Empirical Literature

Nader (2011) in his study on the profit efficiency of the Saudi Arabia Commercial banks sampled 6 Saudi commercial banks, out of 11 ones working in the Saudi banking market. Data collected covered the period 1998 to 2007 for each bank; the study indicated that availability of mobile banking had a positive effect on profit efficiency of Saudi banks. The results showed that the most important determinants of "profit efficiency" are the "availability of phone banking" and the "number of ATMs". Thus, this result was consistent with his idea that availability of mobile banking" is what determines profit efficiency rather than any other determinant in the study.

Ravichandran and Sharma (2012) analyzed the efficiency and performance of selected commercial banks in Saudi Arabia. The study considered 8 commercial banks for a period of 10 years (2000-2009). CRAMEL model (Capital Adequacy, Resource Raising ability, Asset Quality, Management Quality, Earnings Quality and Liquidity) was adopted to assess the efficiency and performance of Saudi banks. The results of the study shows that all the Saudi commercial banks were performing well and the only area all the banks has to concentrate was asset quality. The study also noted that concentration over public deposits was very low when compared to the loans. The results of the ranking based on CRAMEL ratio"s performance shows that AI Jazira Bank was rated as best bank when compared to the other Saudi Arabian banks.

Uppal R.K. (2010) studies the extent of mobile banking in Indian banking industry during the years 2000-2007. The study concludes that among all e-channels, ATM is the most effective while mobile banking does not hold a strong position in public and old private sector but in new private sector banks and foreign banks m-banking is good enough with nearly 50 pc average branches providing m-banking services. Mbanking customers are also the highest in e-banks which have positive impact on net profits and business per employee of these banks. Among all,

foreign banks are on the top position followed by new private sector banks in providing m-banking services and their efficiency is also much higher as compared to other groups. Gakure (2013) from their study it is seen that bank innovations have a moderate influence on profitability of commercial banks in Kenya. The analysis produced a coefficient of determination of 47.8% which shows the percentage of variations in profitability which is explained by bank innovations. The significance test showed that influence of bank innovations on bank profitability was statistically significant. This means that the combined effect of the bank innovations in this research is statistically significant in explaining the profits of commercial banks in Kenya. Banks in Kenya have achieved more than a decade of boosting their earning capability and controlling costs through adoption of innovations like the mobile banking, internet banking and recently the agency banking. Responses presented on the influence of mobile banking on the profitability of commercial banks in Kenya are proved that incomes from mobile banking have high margin and that maintenance costs of mobile banking are low.

Maina (2012) from her study on the contribution of mobile banking to financial performance of commercial banks in Kenya investigated the relativity between mobile banking and financial performance. The study also sought to find the financial strategies that had been adopted by the institutions to enhance growth and efficiency of mobile banking .From the findings of the study 70% of financial institutions in Kenya had adopted process innovation (mobile banking) which enabled them to serve more clients within a shorter time hence boosting the financial performance over time. She concludes that adoption of mobile banking by financial institutions is very important in improvement of financial adequacy of commercial banks as well as improving operations and reduce costs in the long run hence increase in earnings.

Nimalathasan et al. (2013) compared the financial position of state and private sector banks in Srilanka from 2006-2010. The study analyzed the efficiency of the banking sector in Sri Lanka using Bankometer approach. Bankometer ratios are derived from both the CAMELS and CLSA stress test parameters with some modifications. On the basis of the Bankometer results it is found that state banks are in a sounder solvency position in comparison to private sector banks.

Erari et al. (2013) analyzed the precision and accuracy of the financial ratio model by using CAEL, Z-score and Bankometer in assessing the financial performance development of Bank Papua within the period from 2003 to 2011. The results show that the model CAEL and

Bankometer give the same assessment that Bank Papua, from 2003 to 2011, had good wellbeing, was highly liquid, had strong capital, were able to manage debt well, had good profitability, and asset quality but was still lacking efficiency. Z-score model reversely put Bank Papua in a grey area and went bankrupt in 2007 and 2011, weak liquidity and capital. These findings reinforce previous research which suggests that Z-score model is not appropriate to be used in banking, however, the use of Z-score is recommended as the dissenting opinion and early warning system in assessing financial performance of a bank, because it can correctly show critical points in financial management of a bank. All the three models used in the study show that the Bank Papua has good profitability.

Rao (2013) examined the productivity, cost and profitability performance of Traditional banks vis-à-vis Modern banks for the period from 2005-2011. The study classified SBI group, nationalized group and old private sector banks group as traditional banks and new private sector banks and foreign banks as modern banks. A total number of 12 ratios have been selected with a minimum of three and maximum of five in each category to examine the extent of gap between the modern and traditional banks. The study concludes that the gap between the modern and traditional banks significantly reduced during the study period.

Prasad (2012) evaluated the performance of public and private sector banks for the period of 2006-2010. A sample of 39 banks consisting 26 public sector and 13 private sector banks were selected for the study. The study applied CAMEL model which measure the performance of banks from each of the important parameters like Capital Adequacy, Asset Quality, Management Efficiency, Earnings Quality and Liquidity. The study concludes that there is no significant difference between performance of public and private sector banks.

Kumbirai and Webb (2010) investigated the performance of South Africa's commercial banking sector for the period of 2005-2009. They employed financial ratios to measure the profitability, liquidity and credit quality performance of five large South African based commercial banks. The study found that overall bank performance increased considerably in the first two years of the analysis. A significant change in trend is noticed at the onset of the global financial crisis in 2007, reaching its peak during 2008-09. This resulted in falling profitability, low liquidity and deteriorating credit quality in the South African Banking sector.

Singh and Chaudhary (2009) made an attempt to examine the profitability of banks and to identify the key factors that affect their profitability. They considered bank specific as well as macro-economic factors as explanatory variables. The bank specific variables included investment, advances, deposits and assets whereas the macro economic factors considered include per capita income, index of industrial production, wholesale price index, exports and foreign exchange reserves. They regressed the explanatory variables over the dependent variable operating profit. The study found a positive relationship between profitability and investment, per capita income, index of industrial production, wholesale price index, exports and foreign exchange reserves. The study indicated that advances, deposits and assets are factors that significantly affect the profitability of private and foreign banks but not the state sector banks.

In Indonesia, Syafri (2012) explored the effect of internal i.e. bank size, bank loans, capital, credit risk, non-interest income and cost to income ratio and external factors i.e. economic growth and inflation on banks profitability. For profitability measurement ROA is used as a dependent variable. Result shows that both external factors are insignificant for Indonesian banks. However loans and equity of banks are significant and has a positive relation with profitability.

Dore (2013) determined the bank specific and macroeconomic factors of commercial banks profitability in Ghana and concluded that profitability of commercial banks in Ghana is positively related with bank specific variables i.e. Capital adequacy and liquidity of banks and macroeconomic variables i.e. GDP and inflation are negatively associated with profitability. Bilal et al. (2013) in their study analyze the effect of bank specific i.e. deposit to asset, bank size, capital ratio, net interest margin and non-performing loans to total advances and macroeconomic factors i.e. inflation, real GDP and industry production growth rate on profitability measures (ROA and ROE) of all commercial banks. Results shows that bank specific factors (bank size, net interest margin, industry production growth rate and non-performing loans to total advances) are significant and positively effect ROA and ROE except NPL that shows negative relation with both profitability measures. Capital ratio is also found significant and positively related in relation with Return on Equity (ROE) only. Among macroeconomic factors only real GDP has significant positive relation with Return on Assets (ROA).

Taha (2013) examined the profitability of banks in Jordan and revealed that bank specific factors are more important than macroeconomic factors. Capital adequacy (CAR), assets quality, bank size and management efficiency; all these internal factors are significant and positively related with banks profitability.

Mamatzakis and Remoundos (2003) examines the determinants of ROA and ROE i.e. profitability measures of commercial banks in Greek. Study found that management related factors i.e. loan to asset ratio, equity to assets ratio and personal expenses primarily elucidate profitability. Heffernan and Fu (2008) evaluates the performance of Chinese banks by considering four different measures of performance3 to select the best measure and found that best measures of performance are EVA and NIM.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter presented the research methodology and gave details of how the research was conducted. The chapter therefore presented the research design, study area, population of study, sampling strategies and sample size, data collection sources, methods and instruments, data quality control, data processing and analysis, expected constraints, ethical considerations, work plan and the estimated budget.

3.1 Research design

The researcher used a cross sectional study design and the emphasis was put on descriptive research approach because it provided a framework for interpreting the variables of the study. Descriptive research was used to obtain information concerning the current status of the phenomena to describe what exists with respect to variables or conditions in a situation. The technique was appropriate as it involved a careful in-depth study and analysis of the effect of mobile money services on the financial performance of commercial banks. The researcher used cross sectional survey design that adopted quantitative and qualitative approaches to show the effect of mobile money services on the financial performance of Centenary bank, mobile money services and the relationship between mobile money services and the financial performance of commercial banks.

3.2 Study population

Kombe and Tromp (2006) defined population as a group of individuals, objects or items from which samples are taken for measurement. The study focused on respondents who were working at Centenary bank Mapeera branch in Uganda specifically. The choice of this population was based on the belief that the kind of respondents in this population knew better and it involved the bank's staffs who attends to customers and also the number of the customers who were banking at this bank. The sample size and population was determined using Krejcie, Robert V, Morgan, Daryle W, "Table of determining sample size for Research activities", Educational and Psychological Measurement, 2010.

3.3 Sampling strategies and sample size

3.3.1 Sampling strategies

The researchers used a simple random and purposive sampling. Purposive sampling is where by the researcher purposively selects the sample. This technique was used to collect focused information for that matter. (Yoko & Onen, 2005), Simple random sampling refers to a situation where a sample is selected without bias from the accessible population. It was recommended because it ensured that each member of the target population had an equal and independent chance of being included in the sample (Amin, 2005).

3.3.2 Sample Size

Sekaran (2003) asserts that a sample is a subgroup of population from which researchers are drawn. Robson Collin (1999) observes that it is not feasible to gather detailed information about the persons who are involved in all time. Therefore it requires sampling with some principle decisions about who, where and when to be studied. The study sample size was selected basing on Krejcie and Morgan's sample size selection Table (1970). Krejcie and Morgan note that a larger sample would most likely give consistent results compared to a relatively small one; specifically that as the population increases the sample size increases at diminishing and remains constant at slightly more than 380 cases. The sample size constituted of 70 respondents that included the following: Managers, Supervisors, Customers, and junior staff. The Managers were purposively selected by the researcher simply because they were required of some very vital information which could only be given out by them, while all other respondents who were supervisors, junior staff, and customers were selected randomly (simple random sampling). With this method of sampling, every respondent had an equal chance of being selected since it was done randomly thus giving an equal opportunity to all.

3.4 Data Collection Sources and Instruments

The researcher used both primary and secondary sources of data to collect data from various categories of respondents and documentation respectively.

3.4.1 Secondary source

Secondary data collection was conducted by collecting information from a diverse source of documents or electronically stored information. Secondary data was collected from annual reports and financial statements, Print Medias (Newspapers and Magazines). This helped to provide already existing data to facilitate the study.

The secondary data from the financial statements included the after tax profits, total assets, written off debt, and the value of loans outstanding. The researcher administered the questionnaire to each respondent in the study. The questionnaires were both open and closed ended questions.

3.4.2 Primary Sources

Primary data collection used surveys, experiments or direct observations. Primary data was collected using questionnaires where all the issues on the questionnaires were addressed. The researcher designed the questionnaire and distributed them over to the respondents on a one to one basis and ensured that all questionnaires were fully filled to give clear information to enhance quality data for the research.

3.5 Data collection instruments

The researcher used the instruments given below to gather information relevant to the study.

3.5.1 Self-Administered questionnaire

The researcher used structured self-administered questionnaires covering all the variables in the study. In the questionnaires, a five point likert scale was used to ease data processing and analysis. The scale was marked 1-5 where 1 represents strongly disagree and 5 strongly agree. Therefore responses can be analyzed with quantitative methods by assigning numerical values to likert type of scales. The data instrument was vital because the results were generally easier than qualitative technique to analyze. Questionnaires were the main instruments of the study and was particularly distributed to the different categories of respondents of Centenary bank Mapeera branch in Uganda. The questions were prepared in a logical sequence in order to address the research objectives and were both close and open ended which allowed the respondents to give a wider view about their understanding of the study problem. The method was also used because it

targeted a wider group of respondents, it also eliminated bias, and most importantly, the researcher would be able to get that information that was not readily given face to face. To avoid misinterpretations of the questionnaire, the researcher had to translate some questions for the respondents to avoid inaccuracy. The respondents were given one week to fill the questionnaires, which was then collected by the researcher.

3.6 Data Quality Control

3.6.1 Reliability

Reliability of data refers to whether repeating the same measurement under similar conditions yields the same results (Kumar 1990). The reliability of the questionnaires was improved through pretesting of pilot samples from the field which enabled the rephrasing of some questions. Additionally, reliability of the items was done with the application of the Cronbach Coefficient Alpha for the computations so to check the internal consistency of the audit activities. The reliability of the researcher instrument concerned the extent to which the instrument yields the same results on repeated trials. Although unreliability was always present to a larger extent, there was generally a good deal of consistency in the results of a quality instrument at different times. The tendency towards consistency found in repeated measurements is referred to as reliability (Carmines and Zeller, 1979). Getting valid and reliable data is the main aspirations of the research. Triangulation of the research techniques where several methods of data collection employed will be done.

The reliability of the questionnaires was improved through pretesting of the pilot samples from the field which enabled rephrasing of some questions. It was also done with the application of the Cronbach Coefficient Alpha for the computations by considering an acceptable rule that is between $0.5 \leq \alpha \leq 0.1$ so as to check for the consistency of the data where $\alpha = 0.203$.

3.6.2 Validity

This is defined as the extent to which the instruments measures what it purports to measure (Allen and Yen 1979). Content validity pertains to the degree which the instrument fully assesses or measures the construct of interest. The questionnaire were carefully designed and tested with a few members of the population for further improvements. This was done in order to enhance its

validity and accuracy of data to be collected for the study. Validity as a concept refers to an instrument that measures what it intends to measure. There are many instruments which people use but do not measure what they are intended to measure. In terms of experimentations (Baker 1999) holds that there are potentially many ways in which experiments could be charged without actually measuring what they purport to measure. Validity of the instrument tool is the degree to which the tool measures is based on the views that the data is collected from selected department heads, managers, junior staff and customers among others as content validity index and a validity content text respectively.

3.7 Data Processing and Analysis

3.7.1 Data processing

This section involved scrutinizing of the responses that was answered on the questionnaires and interview guide by the different respondents. Then there was sorting, editing, classifying and coding of the obtained data.

At the completion of data collection, the data was edited, processed, analyzed using Statistical Package for Social Scientists (SPSS) and computer packages like MS Word, Excel Computer program, to reduce on errors and check for relevancy and adequacy. Data was thematically arranged and integrated into a report.

Editing; this involves examining raw data collected especially in the survey so as to detect errors of omission and correct them where possible. It involves a careful look at the complete questionnaires to ensure that they are correctly responded to, and for this study field, editing is done by the researcher during data collection stage.

Coding; this is the process of assigning numbers or symbols to answers to enable reducing data into fewer categories. And for this research coding was done before data was collected.

Tabulation; this is the process of transferring the information that has been coded and classified into rows and columns known as a table.

3.7.2 Data Analysis

The study described the characteristics of the respondents using with percentage counts. The means and standard deviations were used to measure the level of accessibility and reliability of mobile money services in the banking industry. The relationships between variables were examined using Pearson's Correlation Coefficient while Multiple Regression Analysis was used to examine the significance of the explanatory variables in the model.

3.7.3 Interpretation of the mean values

The mean values on the level of early intervention and adaptive behavior were interpreted as below.

Minimum	Maximum	Scale rating	Interpretation
4.22	5.00	Strongly agree	Very high
3.42	4.21	Agree	High
2.62	3.41	Not sure	Medium
1.81	2.61	Disagree	Low
1.00	1.80	Strongly disagree	Very low

3.8 Ethical considerations

For the study to be carried out effectively, the researcher had obtained a letter of introduction from the Faculty of CEM which was presented to the respondents before prior to starting any interview or filling in a questionnaire. Sensitization of the respondents for the study was done. This enabled the researcher to carry out the study without fear and for substantive information therefore would be obtained. The researcher further got permission to conduct interviews from specific groups as a matter of procedure in other relevant institutions that were consulted.

3.9 Limitations of the study

The researcher encountered a few limitations during the study especially when it came to interviewing.

i.   **Time;** the researcher faced a challenge of limited time to beat the deadlines as stipulated in the time frame. The researcher overcame this by diligently following the proposed time frame. In addition, the researcher had limited time for carrying out the research and he had to keep up with class work and other assignments like coursework and doing tests. This was solved by making a time table for himself especially concerning when he is supposed to do the research.

ii. **Financial challenges;** this was such a big challenge as the researcher had to move from one place to another to look for the right data. Also it was a challenge since it involved buying internet data so as to get legit information from some scholars, and writers about this research. In addition to this, the researchers had to pay or spend big in terms of typing, printing, transport, and airtime which are too costly. However, this was solved by planning and making a budget after estimating how much the entire research would cost.

iii. **Reluctance to respond;** some of the respondents were expected reluctant to respond. Uneasy and suspicious of the information to be gathered and thought that the data was to be used for other motives against them. However, this was solved by making a follow up onto the respondents who would be given questionnaires.

iv. **Lack of cooperation from respondents;** especially those who considered the information confidential and thought the survey was for the purpose of revenue collection. The researcher therefore assured the respondents of confidentiality of their information that it was solely for academic purposes.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 Introduction

In the chapter, the analysis of the findings was presented according to the objectives of the study. The objectives of the study were; to examine the level of use of different mobile money services available in the banking industry of Uganda. To establish the level of financial performance in the banking in industry. To establish the relationship between mobile money services and financial performance of commercial banks.

4.1 Response Rate

A total of 70 questionnaires were administered to the staff of Centenary Bank Mapeera branch. But at the end of the exercise, 52 questionnaires were collected posing a response rate of 74.3% and a non-response rate of 25.7% for the 18 questionnaires not returned as shown in the table below.

Table 4.1: Response Rate

Questionnaires	Frequencies	Percentages (%)
Returned	52	74.3
Not returned	18	25.7
Total	70	100

Source: primary data, 2018

According to the table 4.1, 74.3% of the questionnaires were returned and 25.7 were not returned implying that majority of the staff participated in the exercise.

4.2 Demographic Characteristics

The study considered five demographic characteristics of the respondents among which included; Gender, Age, marital status, Education level and the department each respondent belongs. The gender of the respondent was categorized as male and female. Age groups were used to categorize the age of the respondents and four different age groups were developed for the study, these included 20-30, 31-40, 41-50, and 50 above years. The marital status of the respondents was also an important characteristic of the respondents; the respondents' marital

status was categorized into five categories that is to say single, married, divorced, widowed and divorced. For the education level of the respondents, four categories were used that is to say certificate, diploma, degree and masters. The departments for the respondents were categorized into six that is Audit, IT, Management, Accounts, loan service and mortgages. The statistics of the demographic characteristics are provided in table 4.2

Table 4.2: Demographic Characteristics of the respondents

Profile	Category	Frequency	Percentage
Gender	Female	13	25.0
	Male	39	75.0
	Total	52	100.0
Age	20-30	5	9.6
	31-40	22	42.3
	41-50	20	38.5
	Above 50	5	9.6
	Total	52	100.0
Level of education	Certificate	4	7.7
	Diploma	17	32.7
	Degree	29	55.8
	Masters	2	3.8
	Total	52	100.0
Marital status	Single	24	46.2
	Married	17	32.7
	Divorced	3	5.8
	Widowed	8	15.4
	Total	52	100.0
Your Department	Audit	3	5.8
	IT	12	23.1
	Management	17	32.7
	Accounts	4	7.7
	Loans service	6	11.5
	Mortgage	10	19.2
	Total	52	100.0

Source: Primary data, 2018

From the table 4.2 above, majority of the respondents at 75% were males compared to the females at 25%. This means that more males are employed at Centenary Bank Mapeera branch compared to the females. This implies that the respondent got reliable information as men are usually more available at the work place because they are flexible and can work for longer hours than the women. Concerning the age of the respondents, 9.6% of the respondents were between 20-30 years, 42.3% were between31-40, 38.5% were between 41 to 50 and 9.6% were above 50. This implies that the majority of the workforce is still young, energetic, hardworking and readily available to execute both short and long term goals of Centenary bank Mapeera branch as regards to improving the financial performance of the bank while the respondents between 20-30 are willing and much more eager to learn from the older one in terms of banking knowledge usage. In Education level, 7.7% of the respondents were at certificate, 32.7% at Diploma level, 55.8% had under degrees, 3.8% held masters. The majority held degrees because they are more flexible, anxious and excited about working and they are cheap in terms of labour and can also spend more hours at work while the ones at master degree are more expensive and most times they are not willing to work for a full day because of the responsibilities and commitments they have at their homes and other places. This too implies that the work is well educated and learned hence have a better understanding of how mobile money services affect the financial performance of Centenary bank Mapeera branch. Furthermore, on marital status, 46.2% are single, 32.7% of the respondents are married, 15.4% are widowed, and 5.7% are divorced. This means that the majorities of the respondents are single and can therefore be creative, innovative and flexible as they only worry about being effective and impressive to their bosses at work unlike the divorced workmates who tend to be more reminisced about their lost and or failed marriages. Finally, on the respondents departments, 5.8% were in the Audit department, 23.1% in IT, 32.7% in management, 11.5% in loans service, 19.2% in mortgages, and 7.7% in accounts department. The management comprises of the highest percentage because it includes human resource, senior and middle managers who have the ability to award us with the information that is relevant to our study. This is because they have acquired enough knowledge and expertise in the field that they are in while the Audit department has the least percentage because Auditors are three, that is, the internal Auditors and two assistants. Therefore, the number of people per department explains the percentage got.

4.3 The Use of Mobile Money Service in Banking Industry of Uganda

To understand deeply the level of use of different mobile money services available in the banking industry of Uganda, descriptive statics were computed in terms of means, standard deviations and ranks. The descriptive statistics provided knowledge on the level of mobile money services available in the banking industry. Means were used as a basis for determining the level of reliability and accessibility of mobile money services while ranks were used to identify the factors that were most rated and least rated by participants.

Table 4.3: Reliability of Mobile Money Services

Factors	Mean	Std. Dev.	Rank	Interpretation
Mobile money services have improved on the financial performance of commercial banks.	4.40	0.721	1	Very high
Most companies have tried to develop their own mobile money service platforms.	4.37	0.687	2	Very high
Mobile money services affect the financial performance of commercial banks.	4.02	1.038	3	High
Most customers use both mobile money services and banking services simultaneously.	3.62	1.207	4	High
Mobile money service charges are cheap compared to bank charges.	2.12	0.878	5	Low
Overall mean	**3.71**			**High**

Source: Primary data, 2018

Table 4.3 shows the level of reliability of mobile money service in the Banking industry in Uganda. Six (6) items were used to measure the reliability of mobile money services where participants were asked to rate the items on a 5-linkert scale. The findings from the analysis revealed that the reliability on mobile money services in the banking industry is generally high observed from an overall mean of 3.71.This is supported by the fact that mobile money services have highly improved the financial performance of commercial banks (mean = 4.4, Std. dev. = 0.721, rank=1) implying that bank customers can use both services in making transactions. A high level of reliability on mobile money services is also explained by a very high level at which most companies have tried to develop their own mobile money service platforms (mean = 4.37,

Std. dev. = 0.687, rank=2) implying that most companies have taken the liberty to develop their own mobile service platforms where the customers can access their bank details using their phones. Further still, a high level at which mobile money services affect financial performance implied by a high mean response of 4.02 and standard deviation of 1.03 also significantly reflected the high reliability on mobile money services. This is from the fact that many people use mobile money to make transactions from or to the bank saving them from incurring transport tariffs of moving to the banks. Similarly a high level was indicated by the findings in relation to whether most customers use both mobile money services and banking service simultaneously (mean3.62, Std. Dev. = 1.207, rank=4). This finding implies that most bank customers use both mobile money services and banking services simultaneously because all of them help in one way the other. However, despite the fact that there is high reliability on mobile money services, a low level was indicated by the findings in relation to whether Mobile Money services are cheap compared to banking services (mean=2.12, Std. Dev. = 0.878, rank=5). This is from the fact that mobile money service charges become very high when dealing with huge transactions.

Table 4.4: Accessibility of Mobile Money Services

Factors	Mean	Std. Dev.	Rank	Interpretation
Mobile money services are available at centenary bank Mapeera branch.	4.83	0.430	1	Very high
Mobile money services enable customers to receive, send or pay for any utilities anywhere at any time.	4.63	0.525	2	Very high
Your organization adopted any mobile money services.	4.54	0.670	3	Very high
Mobile money services are easily accessible than banking services.	4.50	0.672	4	Very high
Overall mean	**4.63**			**Very high**
General mean	**4.17**			**High**

Source: Primary data, 2018

From the table, it was observed that the level of accessibility to mobile money services in the banking industry is high indicated by a general mean of 4.17. This was supported by a very high level at which mobile money services are available at Centenary bank Mapeera branch. This

being ranked the 1st in the construct with a mean response of 4.83 and a very small standard deviation of 0.43. Implying that the availability of mobile money services in the bank is very high making most customers familiar to the service. The findings also show that there is a very high level at which mobile money services enable customers to receive, send, or pay for utilities anywhere at any time (mean = 4.63, Std. Dev.=0.525, rank=2). Therefore customers do not need to travel to their bank branches to make payments or withdraws. Furthermore, a high adoption of mobile money services by banks and a very high-easy accessibility of the services than the bank service as it is indicated from the mean responses also testify of the high level of accessibility of the mobile money service in the banking industry.

Generally, reflecting to the study's 1st objective which aims at establishing the level of use of mobile money services in the banking industry in Uganda, it was observed from the **general mean of 4.17** that there is generally a high level of use of mobile money services in the banking industry in Uganda.

4.4 Financial Performance in the Banking Industry

Financial performance according to Bodie, kane and marcus, 2005 is the level of performance of firm over a specific period of time and expressed in terms of the overall profits or losses incurred over the specific period under evaluation. In this section of the study, financial performance is measured in terms of profitability, loan supervision and revenue sources of the financial banks. And in order to address the study's second objective, 5 likert scaled questions were employed where mean responses were computed and conclusions made basing on general means as presented in the preceding tables.

Table 4.5 Profitability

Factors	Mean	Std. Dev.	Rank	Interpretation
Much of banks' profits are from customers deposits	4.73	0.528	1	Very high
Banks earn a lot of profits from their customers	4.69	0.579	2	Very high
Giving out too much loans generate more profits	4.67	0.550	3	Very high
Loans, mortgages and bank charges provide banks with high margins	4.50	0.754	4	Very high
The size of the bank affects its profits	4.02	1.146	5	High
Overall mean	**4.52**			**Very high**

Source: Primary data, 2018

Table 4.5 shows the level of profitability as a measure of financial performance in the banking industry in Uganda. According to the table, 5 items were used to measure how banks earn their profits from their operations. Basing on these items, respondents were asked to rate appropriately the measures using a 5 likert scale. It was thus observed from the overall mean that there is a very high level of profitability in the banking industry indicated by an overall mean of 4.52. This was due to the fact that much of the banks' profits are from customers deposits (mean= 4.73, Std. Dev= 0.528), ranked the highest in the construct. Implying that the deposits received by the banks from the customers are used to offer out loans and also used for investments that generate the banks with high profits. The findings also indicate that banks highly earn a lot of profits from their customers (mean = 4.69, Std. Dev=0.579, rank=2). This high profits mainly comes from the bank charge on transactions, balance inquiries, interests and son on. Similarly, it was indicated from the findings that banks get high profits from giving out much loans, mortgages and bank charges. Also the size of the bank highly affects its profit level as this was ranked the last with a mean response of 4.02 and standard deviation of 1.146. This draws an implication that small banks make small profit margins than the bigger one.

Table 4.6: Loan Supervision

Factors	Mean	Std. Dev.	Rank	Interpretation
Banks put pressure on the borrowers to retire the loan from earning.	4.63	.687	1	Very high
The loan will customarily be accompanied by written covenant of the borrower to conduct activities in a way agreed upon by the bank.	4.48	.779	2	Very high
Substantial credit is advanced for a period of more than one year	4.40	.799	3	Very high
Commercial banks are able to meet their long term obligation such as loans from the central bank.	3.35	1.327	4	Medium
Banks are quick to sell off property that is given to them as collateral.	2.40	1.125	5	Low
Overall mean	**3.85**			**High**

Source: Primary data, 2018

Table 4.5 shows the mean responses of respondents regarding the level of loan supervision by commercial banks. According to the table, it was indicated from the overall mean that there is a high level of loan supervision in the banking industry observed from an overall mean of 3.85. This was due to the fact that that Banks put much pressure on the borrowers to retire the loans from earning (mean = 4.63, Std. dev =0.687), as this was ranked the highest in the construct implying that the loans retired from customers is ventured in other business which help to stimulate financial performance. Also accompanying loans with written covenants by banks to their customers to conduct business in a way agreed upon supports the high level of loan supervision among banks. This was observed from a high mean response of 4.48, low standard deviation of 0.779 and a rank of 2. Similarly it was indicated that banks highly advance substantial credit for a period of more than one year implied by a mean response of 4.40 and standard deviation of 0.779. Furthermore the high level of loan supervision among banks was observed from the fact that the banks are able to meet their long term obligation such as loans from the central bank and that banks are not so quick to sell off the property that is given to them as collateral.

Table 4.7: Revenue Sources

Factors	Mean	Std. Dev.	Rank	Interpretation
Banks receive revenue from interests	4.65	0.556	1	Very high
Revenue that is earned by banks is got from investments that the bank is involved in i.e. securities.	4.54	0.699	2	Very high
Banks aim to grow revenue by expanding their customer base.	4.46	0.699	3	Very high
Banks have a lot of liquid assets at their disposal i.e. assets that can be easily turned into cash.	4.08	1.064	4	High
Banks are able to meet their short term obligations.	2.83	1.133	5	medium
Overall mean	**4.11**			**High**
General mean	**4.16**			**High**

Source: Primary data, 2018

Evidence from the findings of the analysis revealed that the level of bank revenue is generally high implied by an overall mean response of 4.11. This high level is attributed by the fact that banks receive very much revenue from interests, this was ranked the 1st with a mean response of 4.65 and a lower standard deviation of 0.556 interpreted as very high meaning that the interests put on loans given out by banks generate them a lot of incomes. Also the high income earned from investments that the bank is involved in testify of the high revenue levels of the banks. This was ranked the 2nd with a mean response of 4.54 and standard deviation of 0.669. Concerning whether banks aim at growing revenue by expanding their customer base, it was revealed to be ranked the 3rd with a mean of 4.46 and standard deviation of 0.699 interpreted as very high meaning that in order for banks to increase revenue, they always come up with strategies that bring in customers to them. Finally, looking at banks having a lot of liquid assets at their disposal, it was indicated to be high as observed from a mean response of 4.08 and standard deviation of 1.064 implying that banks have assets that can easily be turned into cash to help them finance other projects.

In general, the study's 2nd objective aims at establishing the level of financial development in the banking industry in Uganda. It was thus observed from the **general mean (4.16)** indicated in

table 4.6 that there a relatively high level of financial performance in the banking industry. This is as a result of a very high level of profitability of the banking service implied by an overall mean of 4.52 as indicated in table 4.4, also a high level of loan supervision by banks evidenced by an overall mean response of 3.85 and similarly a high level of revenue reflected by an overall mean of 4.11 as indicated in table 4.6

Table 4.8: Pearson's Correlation Co-efficient between Mobile Money services, and the financial performance of the banking industry in Uganda.

Covariates (Predictors)	Reliability of mobile money services	Accessibility of mobile money services
	Pearson Correlation	
Profitability	-0.149 (0.292)	0.197 (0.161)
Loan supervision	0.132 (0.350)	-0.052 (0.712)
Revenue	-0.021 (0.884)	0.182 (0.198)
(..)= p. values and Correlation is significant if p. value <0.05		

Source: Primary data, 2018

The 3rd objective of the study was to establish the relationship between the use of mobile money services and the financial performance of banks. Pearson correlation coefficients were computed to determine the strength of the relationships between the different measures of use mobile money services and those of financial performance. The correlation coefficient between reliability of mobile money services and profitability was -0.149 with a p-value of 0.292. This implied that there is a very weak negative relationship between reliability on mobile money services and profitability of the banking industry. Also the p-value suggests that the relationship is not statistically significant at 5% and 1% levels of significance. Similarly, the correlation coefficient between reliability and loan supervision was indicated by r=0.132 with a p-value of 0.350. This signified a very weak positive relationship between reliability of mobile money services and loan supervision. The p-value indicated that the relationship is not statistically significant at both 5% and 1% levels of significance since it is greater than 0.05 and 0.01 respectively. Looking at the reliability on mobile money services and revenue of the bank, it was indicated from r=0.021 that there is a very weak positive relationship between the two indicators.

Also the p-value of 0.884 suggested that the relationship is not statistically significant at both 5% and 1% levels of significance.

Relative to the relationship between reliability and the different measures of performance of banks, it was also indicated from the r value (0.197) and p. value of 0.161 that there is a very weak positive and insignificant relationship between the accessibility of mobile money services and profitability of banks. Furthermore, it was observed from r = -0.052 and value of 0.712 that a weak negative and insignificant relationship exists between accessibility to mobile money services and loan supervision of banks. Lastly, the relationship between accessibility and revenue of banks was indicated to be weak, positive and insignificant at 5% and 1% levels of significance as observed from the r. value of 0.182 and p. Value of 0.198. In general, it was observed that all measures of use of mobile money services are not significant at both 5% and 1% and that they have weak relationships with financial performance of banks. This could be because most bank customers do not use the services provided on mobile money due to high charges and also the distribution of bank branches around the country also makes customers easily access banks in their localities and has reduced congestion in banks.

Table 4.9: Multiple regression analysis between the use of mobile money services and profitability, Loan Supervision and revenue in the Banking Industry in Uganda

Model	Un Standardized Coefficients	Standardized coefficients	Std. Error	t. value	Sig. value
	B	Beta			
(Constant)	3.886		1.167	3.159	0.003
Profitability					
Reliability	-0.133	-0.150	-1.083	-0.025	0.284
Accessibility	0.244	0.198	1.429	1.278	0.159
F. value = 1.601, R. Square = 0.061, overall sig. value=0.212 and df= 2					
Loan Supervision					
Reliability	0.147	0.133	0.157	0.937	0.353
Accessibility	-0.082	-0.053	0.219	-0.375	0.709
F. value = 0.508, R. Square = 0.020, overall sig. value=0.605 and df= 2					
Revenue of the banking industry					
Reliability	-0.021	-0.021	0.132	-0.152	0.880
Accessibility	0.238	0.182	0.182	1.293	0.202
F. value = 0.8471, R. Square = 0.033, overall sig. value=0.435 and df= 2					

Source: Primary data, 2018

4.5 Use of mobile money services and Profitability of banking industry

From the findings in the table, the F. value of the model is 1.061, overall sig. value = 0.212 and R. squared value = 0.061. This implied that the relationship between the use of mobile money services and profitability of the banking industry is not statistically significant observed from the overall sig. value which is greater than 0.05 and a relatively a very small f. value. The R. squared value indicated that there is 0.061 (6.1%) variability between the use of mobile money services and profitability of the banking industry. The unstandardized coefficient for reliability as presented in the table is -0.133, t. value = -1.083, and sig. value = 0.284. Therefore as it is observed that the sig. value is greater than 0.05 level of significance and the magnitude of t.

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value is less than 2, then this implies that reliability of mobile money services is not statistically significant. However it was observed from the coefficient that a negative relationship exists between reliability on mobile money services and profitability of the banking industry. Similarly, the unstandardized coefficient for accessibility β =0.244, t-value =1.429, and sig. value= 0.159. Since the sig. value is greater than α=0.05 and t-value is small then this implies that accessibility of mobile money services is not significant at 5%. But as indicated from the β value of 0.244, a positive relationship exists between accessibility of mobile money services and profitability and as accessibility increases by a unit, profitability of the banks increases by 0.133 (13.3%).

4.6 Loan supervision and use of mobile money services

From the findings in the table, the F. value of the model is 0.508, overall sig. value = 0.605 and R. squared value = 0.020. This implied that the relationship between the use of mobile money services and loan supervision of the banking industry is not statistically significant observed from the overall sig. value which is greater than 0.05 and a relatively a very small f. value. The R. squared value indicated that there is 0.0.02 (2%) variability between the use of mobile money services and loan supervision of the banking industry. The unstandardized coefficient for reliability as presented in the table is 0.147, t. value = 0.937, and sig. value = 0.353. Therefore as it is observed that the sig. value is greater than 0.05 level of significance and the magnitude of t. value is less than 2, then this implies that reliability of mobile money services is not statistically significant. However it was observed from the coefficient that a negative relationship exists between reliability on mobile money services and loan supervision of the banking industry. Similarly, the unstandardized coefficient for accessibility β =-0.082, t-value =-0.375, and sig. value= 0.709. Since the sig. value is greater than α=0.05 and t-value is small then this implies that accessibility of mobile money services is not significant at 5%. But as indicated from the β value of -0.082, a negative relationship exists between accessibility of mobile money services and loan supervision and as accessibility increases by a unit, loan supervision of the banks increases by 0.147 (14.7%).

4.7 Revenue and use of Mobile Money Services in the Banking Industry

From the findings in the table, the F. value of the model is 0.847, overall sig. value = 0.435 and R. squared value = 0.033. This implied that the relationship between the use of mobile money services and revenue of the banking industry is not statistically significant observed from the overall sig. value which is greater than 0.05 and a relatively a very small f. value. The R. squared value indicated that there is 0.033 (3.3%) variability between the use of mobile money services and revenue of the banking industry. The unstandardized coefficient for reliability as presented in the table is -0.021, t. value = -0.152, and sig. value = 0.880. Therefore as it is observed that the sig. value is greater than 0.05 level of significance and the magnitude of t. value is less than 2, then this implies that reliability of mobile money services is not statistically significant. However it was observed from the coefficient that a negative relationship exists between reliability on mobile money services and revenue of the banking industry. Similarly, the unstandardized coefficient for accessibility β =0.238, t-value =1.293, and sig. value= 0.202 Since the sig. value is greater than α=0.05 and t-value is small then this implies that accessibility of mobile money services is not significant at 5%. But as indicated from the β value of 0.238, a positive relationship exists between accessibility of mobile money services and revenue and as accessibility increases by a unit, revenue of the banks increases by 0.020 (2%).

From the summary of the analysis therefore, the regression models on the use of mobile money services and financial performance is derived from the coefficients and is given by;

$$Profitability = 3.886 - 0.133REL + 0.244ACC$$

$$Loan\ supervision = 3.688 + 0.147REL - 0.082ACC$$

$$Revenue = 3.086 - 0.020REL + 0.238ACC$$

Where; REL = Reliability of mobile money services

ACC = Accessibility of mobile money services

3.886 show the level of profitability of the banking industry given no use of mobile money services.

3.688 show the level of loan supervision of the banking industry given no of mobile money services.

3.086 show the level of revenue of the banking industry given no of mobile money services.

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CHAPTER FIVE

SUMMARY, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter presents a summary of the findings, in-depth discussions; conclusion and policy recommendations based on the findings of the study

5.1 Summary of the Findings

This study was conducted in order to determine the effect of use of mobile money services on financial performance of centenary bank in Uganda. The study was primary and employed a descriptive research design where mainly qualitative data was used. These data were collected using a self-administered questionnaire where a simple random technique was followed in sample selection. The analysis of the data was done using SPSS statistical package and results were presented in form of frequency counts, percentages, mean responses, correlation and regression analysis.

Basing on the study's objectives, the findings showed that there is a relatively high level of use of mobile money services in the banking industry implied by a high mean response of 4.17. The study findings also revealed that there is a high level of financial performance in the banking industry observed from a general mean response of 4.16. And concerning the relationship between the use of mobile money services and financial performance, it was revealed that there are very weak positive relationships between profitability and reliability $r = -0.149$, profitability and accessibility $r = 0.197$, loan supervision and reliability $r = 0.132$, loan supervision and accessibility $r = -0.052$, revenue and reliability $r = -0.021$ and revenue and accessibility

$r = 0.182$.

5.2 Discussions

The study set out to determine the effect of mobile money services in enhancing financial performance in centenary bank in Uganda. Mobile money is an integral and important part of mobile commerce. The term mobile commerce covers a wide range of applications that facilitate the exchange of information regarding goods and services and the financial transactions therein

using a mobile device such as a cellular phone and Personal Digital Assistant (PDA) among others. The findings according to the level of use of mobile money services, level of financial performance and the relationship between use of mobile money services and financial performance are discussed in this section.

5.2.1 Level of Use of Mobile Money Services in the banking Industry.

The findings revealed that there is generally a high level of use of mobile money services in centenary bank. This is attributed by the fact that there is high reliability on services provided by mobile money evidenced by a mean response of 3.71 and also the services being highly accessible to customers indicated by a mean response of 4.63. Also Mobile Money services being fast, does not require standing in lines when making transaction makes it highly used in the banking industry. This in other words saves banks from crowds that would flow in to make elementary transactions like paying school fees, paying electricity, and water and TV bills. This finding is further explained by the study carried out by German mobile operator Mobilcom on the effect of Mobile banking on financial performance, who asserted that mobile devices, especially smart phones, are the most promising way to reach the masses and to create "stickiness" among current customers, due to their ability to provide services anytime, anywhere, high rate of penetration and potential to grow. Also Denis. K, 2014 in his study on the impact of mobile money services on performance of commercial banks revealed in the findings a significant increase in awareness and use of mobile money services. The findings according to George. W, (2010) indicated that while the MMS have enormous potential to enhance financial inclusion, it would require an open business model that involves all stakeholders to establish a truly national solution. He furthermore stated that, the initial contribution of MMS to financial inclusion was in improving money transfer by lowering the transaction costs for small volumes. As a way forward, the regulatory authorities need to establish a legal framework that does not stifle innovation but ensures safety for customers' savings.

5.2.2 Level of financial performance in the banking industry in Uganda.

From the analysis of the findings, it was revealed that there is a high level of financial performance in the banking industry. This was observed from a high level of profitability in the banking industry as it was indicated by an overall mean of 4.52, a high level of loan supervision observed from a mean response of 3.85 and a relatively high revenue indicated by a mean

response of 4.11. This is explained by the dominance of very few top banks in the banking sector implying that despite having a market driven banking industry, the industry is oligopolistic in nature, dominated by few and short of competitiveness efficiency advantage. To a great extent, the market behaviour of interest rates is influenced by these top banks. They become market price setters and the clients who desperately crave for bank loans are price takers. The study finding is also supported by the 2016 report released by Business focus concerning the best and worst performing banks in Uganda which indicated that the number of banks making profits increased slightly to 20 in 2016, up from 19 in 2015. The report further noted that despite the heavy macro-economic headwinds of 2016, the banking sector largely continued to register growth. Total industry profit increased by 38.2% to Shs676.7bn in 2016, up from Shs489.6bn recorded in 2015. However Kairye. I, 2016 reported that on the overall, the performance of banking sector in Uganda in 2015 alone does not illustrate sizeable concerns but the medium term trend postures concerns. He therefore noted that not only measures to reduce high operational expenses of banks but also promote further financial intermediation and measures to boost private sector credit are needed.

5.2.3 Relationship between the use of Mobile money services and Financial Performance of centenary Bank.

From the findings of this study, it was indicated that the relationship between the reliability on mobile money services and profitability in the banking industry was generally a weak, negative and insignificant one observed from a small correlation coefficient of $r = -0.149$. this was similar to relationship between accessibility of mobile money services and profitability as it was also indicated to be a weak, however positive and insignificant relationship observed from a correlation coefficient of $r = 0.197$. When a regression analysis was performed on the reliability, accessibility of mobile money services and profitability of the banking industry, it was also indicated that the use of mobile money services was still insignificant at 5% as indicated by a sig value of 0.212.

From the findings of this study, it was also indicated that the relationship between the reliability on mobile money services and loan supervision in the banking industry was generally a weak, positive and insignificant one observed from a small correlation coefficient of $r = 0.132$. this is similar to the relationship between accessibility of Mobile Money services and loan supervision

as it was indicated to be a weak negative and insignificant relationship observed also from the correlation coefficient of r = -0.052. Regression was also performed on the reliability, accessibility of Mobile Money services with loan supervision in the banking industry and it indicated that the use of mobile money services was still insignificant at 5% as indicated by a sig value of 0.605.

Finally, the findings also indicated that the relationship between the reliability on mobile money services and revenue in the banking industry was generally a weak, negative and insignificant one observed from a small correlation coefficient of r = -0.021. This is similar to the relationship between accessibility of Mobile Money services and revenue as it was indicated to be a weak and positive and insignificant relationship observed also from the correlation coefficient of r =0.182. Regression was also performed on the reliability, accessibility of Mobile Money services with revenue in the banking industry and it indicated that the use of mobile money services was still insignificant at 5% as indicated by a sig value of 0.435.

These findings are in line with the findings of Ambrose. T, (2014). In his study about mobile banking and financial performance of commercial banks in Uganda he concluded that there is a weak direct relationship between mobile banking and financial performance. In his study, the Pearson correlation coefficient stood at 0.79. Denis. K, 2014 in his study on the impact of mobile money services on performance of commercial banks explained that Ugandan commercial banks have experienced both a decline in profitability and liquidity in recent years as being attributed to the growth in use of mobile money services. He further recommended that commercial banks should partner or enter into joint ventures with mobile money operators. With such partnerships, banks would have effective models to expand their physical reach into poor and rural areas. This arrangement would deliver the required level of proximity and low transaction costs, which are essential in increasing client deposits, a source of liquidity. More so, commercial banks should take advantage of the products that are not provided by mobile operators. For example, credit or loan facilities and insurance services where banks have competitive advantage over mobile operators. It is hoped therefore that this will build a strong bond between the client and the bank which guarantees regular flow of cash in or cash out transaction. However this study's finding is contrary to the findings of Carolyn. M, (2013) in her study about the effect of mobile money on the financial performance of commercial banks in Kenya, in her findings, the mobile money of

the commercial banks had steadily increased over the 5 year period (2009 to 2013) and also the commercial banks' financial performance also steadily increased over the same period, she therefore concluded that mobile money positively affected the financial performance of the commercial banks in Kenya. Mobile money which is a part of financial innovation has an effect on the commercial banks' profitability and achievement of their objectives where customer's satisfaction is achieved, easy access to the banks, saves time and costs and enables banks to increase competitiveness and ensure sustainable profit (NW, 2006).

5.3 Conclusion

From the findings of the study, the following conclusions basing on the objectives were drawn:

There is a high level of use of Mobile Money services in Centenary bank due to the reliability, accessibility and convenience of the services. Various studies point to the vital role Mobile money services can play in improving the flow of resources in emerging economies of Africa and Asia. This potential lies in the ability that MMS have to allow money to flow electronically rather physically, thereby eliminating or reducing the spatial and temporal barriers to money transfer (Morawczynski and Pickens, 2009).

There is a high level of financial performance implicated by a high profitability, high loan supervision and revenue sources.

There is a weak positive and insignificant relationship between the use of mobile money services and financial performance of centenary bank. While findings of the study indicated that the MMS have a weak positive effect on financial performance, it would require an open business model that involves all stakeholders to establish a truly national solution. Furthermore, the contribution of MMS to financial performance is in improving money transfer by lowering the transaction costs for big volumes. In addition, the mobile money accounts do not necessarily increase the number of bank account holders in the bank making their contribution to financial performance limited to improving payments and money remittance.

5.4 Policy Recommendations

Centenary Bank Uganda should conduct research on other possible 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 and capture market niches that competitors have not identified hence expand on the market share leading to improved financial performance.

Free training and refreshing training should be provided to staff of the financial institution and if possible to customers to equip them with skills in the ever changing technology.

Centenary Bank Uganda should provide toll free line to enable customers who want to use the system and also in case of any problem that deserve attention of the banking institution.

Agency banking should now take a centre stage in the banking institutions short term strategic plans to deepen financial services further and ensure inclusion of the unbanked and the under banked as this is a huge market that remains a priority focus of the mobile money service providers. If possible banks should target to recruit as many agents as mobile money service providers have done as well as reduce agency banking fees to make their services affordable to both the rich and the have-nots

5.8 Areas for further research

I recommend further studies in the following areas:

- ➢ Accountability and financial performance of the financial sector in Uganda.
- ➢ Corporate governance of public listed companies in Uganda.
- ➢ Improving corporate disclosure process in commercial banks in Uganda.

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APPENDIX A: QUESTIONNAIRE
KAMPALA INTERNATIONAL UNIVERSITY

I am Okello Andrew a student of Kampala International University pursuing a Bachelor's Degree in Statistics. As one of the requirements for the partial fulfilment of the university requirements, am required to write a report entitled "Mobile Money Services and the financial performance of commercial Banks a case study of Centenary Bank Mapeera branch." You have been selected to participate in the study through random sampling and we kindly request you to provide data regarding the study and the data you will provide will be used purposely for academic use, so feel free to give your views. Your response will be treated with utmost confidentiality.

Your contribution by way of responding to the questions will be highly appreciated.

INSTRUCTION:

(Please tick or fill in the most correct and relevant answer in the space/box provided)

Section A: BACKGROUND INFORMANTION

1. Gender

1 Female ☐   2 Male ☐

2. Age bracket

1) 20-30 ☐   2) 31-40 ☐   3) 41-50 ☐   4) Above 50 ☐

3. Level of Education

1) Certificate ☐   2) Diploma ☐   3) Degree ☐   4) Masters ☐

5) Others specify...

4. Marital status

1) Single ☐   2) Married ☐   3) Divorced ☐   4) Widowed ☐

5. Which department do you belong?

1) Audit ☐   2) IT ☐   3) Management ☐   4) Accounts ☐

5) Loans service ☐   6) Mortgages ☐   7) others
Specify..

THE DIFFERENT MOBILE MONEY SERVICES IN UGANDA

In the table below use 1=Strongly Agree 2=Agree 3=Not Sure 4=Disagree 5=Strongly Disagree.

What is your level of agreement on the following statement relating to mobile money services?

Different mobile money services	1	2	3	4	5
Reliability Mobile money services have improved on the financial performance of commercial banks.					
Most companies have tried to develop their own mobile money service platforms so as to retain their customers.					
Mobile money services affect the financial performance of commercial banks					
Most customers use both mobile money services and banking services simultaneously.					
Mobile money service charges are cheap compared to bank charges.					
Accessibility Mobile money services are available at Centenary Bank Mapeera branch.					
Mobile money services enable customers to receive, send or pay for any utilities anywhere at any time.					
Your organization adopted any mobile money services.					
Mobile money services are easily accessible than banking services.					

THE MEASURES OF FINANCIAL PERFORMANCE IN THE BANKING INDUSTRY

In the table below use 1=Strongly Agree 2=Agree 3=Not Sure 4=Disagree 5=Strongly Disagree. What is your level of agreement on the following statement relating to measures of financial performance in the banking industry?

Measures of financial performance in the banking industry	1	2	3	4	5
Profitability Much of the banks' profits are from customers deposits.					
Banks earn a lot of profits from their customers					
Giving out too much loans generates more profits.					
Loans, mortgages and bank charges provide banks with high margins					
The size of the bank affects its profits.					
Loan supervision Banks put pressure on the borrowers to retire the loan from earning.					
The loan will customarily be accompanied by written covenant of the borrower to conduct activities in a way agreed upon by the bank.					
Substantial credit is advanced for a period of more than one year.					
Commercial banks are able to meet their long term obligation such as loans from the central bank.					
Banks are quick to sell off property that is given to them as collateral					
Revenue Banks receive revenue from interests.					
Revenue that is earned by banks is got from investments that the bank is involved in i.e. securities.					
Banks aim to grow revenue by expanding their customer base.					
Banks have a lot of liquid assets at their disposal i.e. assets that can be easily turned into cash.					
Banks are able to meet their short term obligations.					

THE RELATIONSHIP BETWEEN MOBILE MONEY SERVICES AND FINANCIAL PERFORMANCE ON COMMERCIAL BANKS.

In the table below use 1=Strongly Agree, 2= Agree, 3=Not Sure, 4=Disagree and 5=strongly Dis Agree. What is your level of agreement on the following statement relating to relationship between mobile money services and financial performance on commercial banks between mobile money services and financial performance of commercial banks?

THE RELATIONSHIP BETWEEN MOBILE MONEY SERVICES AND FINANCIAL PERFORMANCE	1	2	3	4	5
Mobile money services highly reduce on the profile margins of commercial banks.					
Mobile banking requires a highly effective banking system at any commercial bank.					
I am satisfied with mobile money services that may a bank offers me.					
There is relationship between mobile money services and financial performance of commercial banks.					
Commercial banks must offer more innovative services to their customers to improve on their financial performance					
There is a positive and strong relationship between mobile money services and financial performance.					
Mobile money services may be improved for efficient financial performance of commercial banks.					

APPENDIX B: RESEARCH TIME FRAME

Activity	FEB-MAY	JUNE	JULY
Proposal development	▓▓▓		
Corrections		▓▓▓	
Data Collection		▓▓▓	
Data analysis		▓▓▓	
Submission of final thesis			▓▓▓

APENDIX C: PROPOSED BUDGET

Particular	Quantity	Amount (Ug.sh)
Stationary	3 copies @ 17,000 (binding inclusive)	51,000
Questionnaires	140 copies @ 200	28,000
Transport costs		64,000
Data collection Assistant		40,000
Up keep		80,000
Miscellaneous		30,000
	Total	**293,000**