

**THE EFFECT OF AGENCY AND MOBILE BANKING ON LIQUIDITY OF
COMMERCIAL BANKS IN KENYA**

BY:

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DECLARATION

I declare and swear that this research proposal is my original work and has never been submitted to this university or any other university for academic award or assessment.

Signature: 

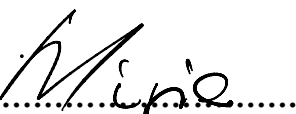
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This research proposal has been submitted for examination by my authority as the university supervisor, Department of Finance and Accounting.

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Prof. Mirie Mwangi.

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DEDICATION

I dedicate my dissertation to my loving family and the University of Nairobi. Special gratitude to my loving parents, Nancy and Obed Ombongi for their words of encouragement, support, prayer, and guidance. My wife, Jackline for believing in me and giving me words of encouragement that made it a success and also for her unwavering support.

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ABBREVIATIONS

ANOVA	Analysis of Variance
ATM	Automated Teller Machine
BI	Behavioral Intention
CAK	Communications Authority of Kenya
CAR	Capital Adequacy Ratio
CBK	Central bank of Kenya
CO-OP	Cooperative
CPI	Consumer Price Index
CRAR	Capital to Risk Asset Ratio
CRR	Cash Reserve Ratio
FED	Federal Reserve System
GDP	Gross Domestic Product
KBA	Kenya Bankers Association
KBA	Kenya Bankers Association
KNBS	Kenya National Bureau of Statistics
LOC	Line of Credit
MFC	Mortgage Finance Company

NBFI	Non-Banking Financial Institution
PEOU	Perceived Ease of Use
PIN	Personal Identification Number
POS	Point of Sale
PU	Perceived Usefulness
ROE	Return on Equity
TAM	Technology Advancement Model

ABSTRACT

The objective of this research was to determine the effect of agency and mobile banking on the liquidity of commercial banks in Kenya. The research was carried out to establish how agency and mobile forms of banking influenced commercial banks' liquidity. Banks highly depend on customer deposits and this is of benefit to them if the rate at which withdrawals are done is less compared to the rate of making deposits and it is mainly through the platforms under consideration that an assessment was done to determine the effect they have on liquidity. Most people in this era have access to phones and can easily transact via their phones on a 24-hour basis from wherever they are as long as they have network access and sometimes the internet. The descriptive research design was used to enhance the achievement of the core objectives and the study included 39 commercial banks. Data collected for analysis related to five years from 2016 to 2020. This data was secondary and was extracted from CBK and the individual banks' websites. The research's dependent variable was liquidity while the independent variables included; agency banking, mobile banking, bank size (Assets), and the CAR. Liquidity was measured by the current ratio, that is, for the commercial banks while agency banking, mobile banking, assets, and CAR were measured by agency transaction value per total transacted value for a bank, mobile banking transaction value per total transacted value for a bank, the total value of assets and total capital to total risk-weighted assets respectively. At a 95% significance level, the study established that there was a moderate positive relationship between the dependent and independent variables. CAR had the highest impact on liquidity followed by assets, mobile banking, and agency in that order. The benefits attributed to agency and mobile banking are a true reflection of the commitment of commercial banks to capitalize on opportunities to increase the value of transactions and remain relevant in today's world. These forms of banking have created convenience, reduced costs, served the underbanked, enhanced economic development, and banks' efficiency in operations. It is therefore recommendable that banks invest more in them but put more emphasis on bank assets and capital adequacy ratio to enhance their liquidity. Agency and mobile banking can lead to more effective operations and profitability. In as much as banks are to invest much in technology, they should also consider the unanticipated events that may influence liquidity like political climate and environment. Overall, the relationship between dependent and dependent variables was at 74% and 55% variations that caused changes in liquidity were explained by the research model.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

In modern times, Kenya has been experiencing significant growth in the use of agency and mobile forms of banking by commercial banks. These are ascribed to advanced technology use in the banking industry. Accessing banking services in Kenya and the rest of Africa has been enhanced by the use of mobile and agency banking. Agency and mobile banking are linked to liquidity by transactions conducted through them measured by the value per volume of transactions. The need by banks to increase growth through transactions, quality services, and reduced infrastructural costs has led to the adoption of agency and mobile banking.

The study relies on financial intermediation theory, agency theory, liquidity preference theory, and technology advancement model (TAM) to explain the relationship between agency and mobile banking against liquidity. Financial intermediation theory explains the contribution of agency and mobile banking to banks' intermediation process and consequently their liquidity. Agency theory explains the relationships between agents and principals and in this case bank and agents or mobile subscribers. Liquidity preference theory explains the motives of the demand for money and in this context, the theory will explain how these transactions from the motives influence liquidity through agency and mobile banking. TAM which explains the process of accepting technology innovations reveals why many banks are using agency and mobile banking.

Fin Access (2019) found out that Kenya has been ranked as the third most financially inclusive nation in Africa after Seychelles and South Africa. CBK in conjunction with KNBS also established that about 83% of Kenyans have access to formal financial services while 11% are excluded. World Bank Group (2020) states that about 1.7 billion people remain unbanked in the

whole world and 17% of this is from Sub-Saharan Africa. Recent cases of mergers and acquisitions in the banking industry reveal that liquidity management practices are not effective hence the need to conduct this study and establish whether there is an association between agency and mobile forms of banking, and commercial banks' liquidity in Kenya. Liquidity in layman's language is what keeps businesses going.

1.1.1 Agency and Mobile Banking

CBK (2010) defines agency banking as contracting a sought-after entity by commercial banks to provide definite bank services on behalf of the bank to its clients. Agency banking approved activities include cash withdrawals, bills payments, cash deposits, funds transfer and customer balance inquiry, checkbook activities and customer collections, account opening, generation and issuance of mini statements, credit/debit card application, and collection of bank correspondences. Dianga (2014) defines agency banking as a non-bank commercial business or correspondent that provides financial and banking services on behalf of a commercial bank through a prescribed authorization. Agency banking is a way of taking banking activities to the unbanked and underserved clients at a cheaper rate. Kagan (2008) defines agency banking as banking through agent banks by offering a wide variety of banking services for businesses and persons. Kumar et al (2006) define agency banking as banks' partnership with non-banking institutions, typically commercial retail outlets, oscillating from post offices, lotteries, pharmacy shops, and many others to offer financial services on behalf of banks. The researcher can therefore conclude that agency banking is a form of banking that enable banks to reach the underserved part of their clients in need of their services when the banks: have closed from the daily operations; where clients are in remote areas; when banking hall cannot satisfy the large

demands from clients and when banks are closed for business to ensure that the clients are served at their level interests and convenience through the selected bank agents.

Tam et al (2017) define the mobile form of banking as an amenity provided by fiscal establishments such as banks to allow their customers to conduct financial transactions remotely and to also access their services just by using a mobile device for instance phone. Vaidya (2011) defines mobile banking as the package provided by banks and other financial institutions to allow the customer to perform financial transactions remotely with handheld devices such as mobile phones, smartphones, and tablets. Mobile network companies in Kenya have partnered with Commercial Banks to offer mobile money services like Mpesa to reach the unbanked and increase the customer base. It is considered the most effective approach as one only needs a phone to access all banking services at a cost that is either in form of internet or credit which is very low compared to the costs associated with physically visiting a bank. It involves the use of a registered line provided by the telecommunication network provider or the bank itself, or software called an app developed by the financial institution to access banking services. This service is available on a 24-hour basis unlike agency banking and traditional banking. Mobile banking provides a user with services of obtaining account balances, a list of latest transactions, remotely checking deposits, electronic bill payments, loan requests, statement access, and funds transfers.

The variables of the study, that is, agency and mobile banking had been previously measured by the amount of money transacted and the volume of transactions calculated as the value per volume of transactions. Other researchers have used the number of agents in place of the volume of transactions calculated as the value per number of an agent. Mobile banking can also be measured by the number of subscribers registered within a period. Data on transactions related to

agency banking and mobile banking was used by most researchers in measuring these variables. The data was extracted from audited financial statements of the banks and CBK as a regulatory authority.

1.1.2 Liquidity of Commercial Banks

Hummel (2006), states that liquidity is the capacity of a bank to meet its financial obligations as and to when they fall outstanding. According to him, the main challenge of banks is maintaining liquidity under all reasonable conditions. FED (2019) describes liquidity as a measure of the cash and other assets banks have available to quickly meet obligations that are short-term in financial and business nature. CBK (2020) defines liquidity as the capability of a bank to meet its obligations as and to when they become payable without incurring undesirable losses. In my opinion, liquidity is the amount of cash and easily cash convertible assets available to meet financial obligations as and to when they fall due.

According to Onyiriuba (2016), the management of bank liquidity risk in developing nations tends to be ineffective. Managing liquidity should be a regular process necessitating banks to screen and project cash flows relating to a bank to make sure that adequate liquidity level is maintained. This involves sustaining a balance between current assets and current liabilities. Primary liabilities of individual banks are as a result of client deposits (banks owe the owners) while primary assets are in for of reserves and loans (owed to the bank). Liquidity is directly linked to cash deposits and withdrawals through agency and mobile banking and this brought to the attention of the researcher to establish whether there is a relationship between them. Statutory management and receiverships by regulatory authorities of banks are also an aspect of interest in this study. Banks with strong agency and mobile banking tend to outperform those without these variables. A liquidity crisis may arise when the clients of the bank feel that the bank might be

unable to generate adequate cash to meet their needs without incurring financial losses leading to a bank run. This, therefore, may hinder the effectiveness of a bank's operations.

Gabilondo (2016) states that liquidity is measured by liquidity ratio and the same is compared to the set rate by the main bank regulators within an economy. The ratio is calculated normally by dividing current assets by current liabilities. For banks, the cost of liquidity is a vital measure of the value of a bank and its success. Lower costs of liquidity create stronger profits, increase the stability of banks, and assurance among investors, clients, and regulators within the banking industry. Banks' liquidity depends solely on customers' deposits which are directly and indirectly linked to agency banking and mobile banking.

1.1.3 Agency, Mobile Banking, and Liquidity

Balaba et al (2020) state that agency banking influences banks' liquidity levels since lack of liquidity deprives customers of their right to use the money. Njeru (2016) points out that the liquidity of banks increases as the number of transactions increases. Both agency and mobile banking are directly and indirectly involved in carrying out transactions, for instance, deposits and withdrawals. Since agents are contracted for purposes of offering banking services on behalf of banks to clients, they contribute to either an increase or a decrease in liquidity levels. Bank agents may operate beyond the normal bank working hours and depending on the type of transaction, for instance, deposits or withdrawals, there is a likeliness of either a positive or negative change to liquidity level. Bank agents and mobile holders must also be liquid for them to conduct transactions. The operations of agency banking are directly linked to banks and entirely depend on network availability. Mobile banking is a simple operation that requires a PIN to authorize transactions between one's account and the recipient by use of a phone. This leads to either a decrease in funds in the account or an increase depending on the type of transaction

conducted by the account holder. People can now pay bills, withdraw money, transfer money, repay loans, and save money without a physical appearance on a traditional banking hall. This means that liquidity levels are subject to the transaction by the use of mobile devices. A deposit means an increase in liquidity level and withdrawal means a decrease in banks' liquidity levels. When banks use agency and mobile banking in conjunction with their traditional branches, it implies that the number of transactions will increase since the level of customer service will also increase therefore resulting in an effect on the liquidity level. The net effect of the volume of deposits and transactions may either be negative or positive depending on the higher value between the two but rather works well for banks.

The numbers of agents and agent transactions have been on the rise and this means that banks' deposits from customers through the agents and withdrawals are also on the rise leading to changes in banks' liquidity levels. Banks' operations and continuity greatly depend on liquidity which is typically influenced by the value and number of transactions conducted through the agents and mobile phones. Customers' deposits through these platforms have been on the rise recently because many people have access to phones unlike in the past and others are using agency banking to avoid congestions and long queues in banking halls and also reduce transport costs to banking halls. CBK's annual report (2018) states that the increased number and value of transactions emphasize the growing assurance and tolerability of agency and mobile banking. Therefore, agency and mobile banking are expected to influence banks' liquidity either positively or negatively hence the need to conduct this research to determine the type of association between these variables and the direction of the relationship.

1.1.4 Commercial Banks in Kenya

Commercial banks operating in Kenya are under the regulation of the CBK, Banking Act, and the Company Act. These banks are certified and governed by the CBK after being assessed on their potential to sustain themselves in the foreseeable future. They must prove to the CBK that they can meet their obligations as and to when they fall outstanding. The Company Act regulates the registration and formation of companies and lays down rules that ought to be fulfilled for an entity to be called a company and in this case a bank. The Kenyan Banking Act regulates mainly the operations of banks. Banks have also come together to form a union called KBA which deals with issues affecting the banks. This union was registered on 16th July 1962.

According to the CBK report of the year ended 2020, there were forty-two banking institutions in Kenya which are divided into forty-one banks and one MFC. Forty out of the forty-two institutions were owned by the private sector while the government of Kenya had a controlling interest in only two institutions. Twenty-three banks out of the forty banks owned by the private sector were locally owned while the rest of the banks had foreigners as their majority shareholders. Twenty-three banks that were owned by Kenyans relate to twenty-two commercial banks and one MFC. The seventeen banks owned by foreigners comprise fourteen affiliates and three foreign banks' branches. This information excludes three banks (Charterhouse Bank Ltd, Imperial Bank Ltd, and Chase Bank (K) Ltd) which are under statutory management and receivership respectively.

Agency and mobile banking adoption have changed the way banks operate in Kenya. As of December 2020, twenty commercial banks had contracted 67314 active agents. The number of banking transactions through the contracted agents had increased from 163 million in 2019 December to 177.3 million in 2020 December and the value of mobile banking from 1.22 trillion

to 5.2 trillion respectively. The percentage increase in agents was 3.6% and the percentage increase in value was 2.68%. All banks had implemented the use of mobile banking as of the date of this research which includes banking in form of SMS, access to bank services, deposits, checking balance, withdrawals, transfers and this has been enhanced by partnerships with mobile money service providers and telecommunication companies. Most banks have adopted them for greater financial inclusion, to take services to their clients with minimal costs, to reduce crowding in bank halls, to maintain their liquidity levels since the process of depositing and withdrawal has been enhanced. The CBK minimum required rate for liquidity is 20%. The average rate of liquidity for banks from 2016 to 2020 was 41.8%, 44% and 48.1%, 48.6%, and 49.7% respectively (CBK Annual reports). From there, we can establish that liquidity has been increasing since then. Even though the average rate tends to be higher than the minimum rate, it is not a true representation of all banks since some are not able to attain the set rate. The volume of transactions conducted through agency and mobile banking is directly linked to the liquidity of the banks. The study, therefore, focuses on identifying the influence that agency and mobile forms of banking have on the commercial banks' liquidity in Kenya.

1.2 Research Problem

Rapid changes in the bank operating environment have led to the need to develop innovative banking products that should go in hand with the increased customer demand, effective operations, and meeting financial obligations. Agency and mobile banking avenues which are a result of technological advancement have been embraced by most banks and this means increased value and volume of transactions in the banks in terms of deposits and withdrawals, therefore, affecting their liquidity levels. Recent cases of banks being put under receivership or merging to avoid dissolution or liquidation show that the problem of liquidity within banks is on

the rise. Although most banks have welcomed the use of mobile and agency banking, not all banks in Kenya are using such platforms due to the costs associated with them. The liquidity crisis in commercial banks has led to the development of interest in this research topic which will help banks typically understand whether the agency and mobile banking can be used to curb the problem.

Most commercial banks in Kenya have not fully implemented the use of agency banking but all commercial banks have implemented the use of mobile banking. The minimum prescribed liquidity ratio by CBK stands at 20% and in the year 2020, the ratio had increased to 54.6% which is 2.73 times the CBK required rate. An increased level of liquidity in the Kenyan commercial banks means that when the financial obligations of banks arise, most will meet them without incurring any additional costs like liquidation costs, legal costs, and reputation costs. Liquidity helps banks to continue existing in the foreseeable future when only managed well. A liquidity ratio measures how much high-quality assets a financial institution is holding to fund cash outflows for at least 30 days. There is a need to make sure that banks' operations in Kenya are not at a standstill by making sure that the levels of liquidity are either maintained or enhanced to meet financial obligations and this makes the study relevant which is to determine whether the agency and mobile banking influence banks' liquidity levels.

Shah et al. (2018) conducted a study on the factors affecting liquidity in the Pakistan banking sector. The research was carried out between 2007 and 2016 and a sample of 23 banks was used and applicable econometric conditions were employed. Results revealed that the factors from the internal environment like CAR, bank size, and cost of funds are statistically important but related in a different way to the liquid assets over the total assets and to total loans over total deposits separately. Kashyap et al. (2002) steered a study on banks as liquidity providers. The researchers

took into consideration the key two roles of banking institutions, taking customer deposits, and giving out loans to borrowers as the main those that necessitate banks to sustain liquidity cushion to contain withdrawals from customers. The reason is that permitted loan granting or LOC is of less impact compared to a current account with insufficient funds since the customer's right to withdrawal is not catered for. Abubakar et al (2015) studied the effects of electronic forms of banking on the liquidity of deposit-taking banks in Nigeria. The researcher concluded that there was a negative significant association between internet banking and liquidity and that there was no substantial association between point of sale and mobile banking and the liquidity of deposit-taking banks in Nigeria.

Njilu (2016) studied the influence of electronic banking on commercial banks' liquidity in Kenya where she established that the variables had a strong relationship. The focus of this research was broader and this current study will only focus on agency and mobile banking since according to the researcher, they are the ones widely used by those who don't have access to traditional bank halls. Most researchers are focusing their interests on the influence the variables of study have on financial performance and not liquidity which is an important aspect. For instance, Monica (2016) studied the influence that agency form of banking had on the fiscal performance of commercial banks within Kenya. The study established that there was a strong correlation between agency banking and the performance of a bank and in the current study; the researcher will try to find out the association between the agency and mobile form of banking and the bank's liquidity. Manga et al (2017) found out that there was a strong association between the liquidity of banking institutions and their deposits through mobile banking.

The studies done in this area are not enough to justify the finding hence the need to research this area. This would therefore help the various banks facing hardships in liquidity management to

adopt banking models that will help increase the levels of liquidity. This research, therefore, aims at establishing the relationship, that is, the association amongst agency and mobile banking on the liquidity of commercial banks within the Kenyan jurisdiction.

1.3 Research Objectives

To find out the effect of agency and mobile banking on the liquidity of commercial banks in Kenya.

1.4 Value of the Study

The sub-section shows how various parties can benefit from the study about the effects of agency and mobile forms of banking on commercial banks' liquidity in Kenya. In general, this research will be of significant benefit to theory, policy, and practice. In the area of theory, the study will be a source of rich information for academicians, institutions, and other scholars. The knowledge of the study variables will be applied widely in theory and can be used as a foundation for the development of important tenets in the banking industry both locally and internationally.

In policy formulation and revision, the study will be of great importance to the regulators within the banking industry since it will give a general overview of the effects of agency and mobile banking on the liquidity of commercial banks. Since most banks have adopted these forms of banking, it is therefore to the advantage of regulatory authorities to use the findings in formulating policies that will influence the banking sector positively and also review the available policies for the benefit of the economy and the banks in operation. Policymaking authorities will use the results to explore present and impending concerns in the banking industry.

In practice, banking management and financial analysts will be able to assess a bank's performance in terms of liquidity against that of its peers in the banking sector and its past

liquidity levels to determine a suitable acceptable level of liquidity required for banks in relation to using agency and mobile form of banking. Professionals oriented to the banking world will also use the findings to evaluate and relate issues in banks concerning liquidity and agency or mobile forms of banking. The findings can also help benchmark and carry out research activities within various banking and non-banking institutions.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The part consists of theories related to the research topic, a description of the research variables both dependent and independent, a review of studies done locally and internationally, and a summary of the chapter.

2.2 Theoretical Review

The theoretical review will constitute the ensuing philosophies that try to explain the association between agency and mobile banking, and the banks' liquidity. The theories in the picture are; theory of financial intermediation, theory of agency, theory of liquidity preference, and the technology acceptance model.

2.2.1 Financial Intermediation Theory

Allen et al (1996) state that financial intermediation involves a medium between two parties to facilitate financial transactions through a financial intermediary who is usually commercial banks, investment banks, stockbrokers, pension funds, insurance companies, and stock exchanges. Financial intermediation enables the transfer of funds from lenders to borrowers that is from those with surplus funds to those with a deficit but in an indirect manner. Smith et al (1976) said that the role of a financial intermediary is to create a specialized financial commodity. The commodity is a derived demand and, in this study, the demand is for banking services. Money moves in to and out of the bank accounts through agency and mobile banking. These two platforms act as intermediaries between the commercial banks and their clients. They enhance liquidity through the transactions conducted through them. Liquidity has a direct relationship to these platforms theoretically. The theory is relevant because as the banks are

receiving deposits from customers or lenders, they also in turn lend the same to those who need it and this involves cash-in and cash-out transactions through agents and mobile banking. It will help us understand the role of intermediation in the banking industry.

2.2.2 Agency Theory

This theory is attached to the relationship created by the relationship between an agent and the principal. Eisenhardt (1989) stated that the principal (person or entity) allows or gives rights to the agent (person or entity) to make decisions and/or to take actions on behalf of the principal. There is always a dilemma when the agent works to serve their interest other than that of the principal. Various ways can be used to align the interests of agents and principles and this includes; sharing of profits; efficient wages; piece rates/commissions; measurement of performance; posting of a bond by agent and threat of termination.

In this case, the agent-principal relationship has led to the agency banking model where banks allow agents to provide services on their behalf and which suits their interests. This theory greatly touches the areas of the agency and mobile banking as parties other than the bank themselves where they are allowed to act on behalf of the banks. Agency relationship influences the liquidity of banks through the transactions carried by them. This theory is important because it depicts the relationship between the banks and agents and will help us understand their operations.

2.2.3 Liquidity Preference Theory

Drawing from Keynes (1936), the theory relates to the demand for money. Keynes developed this concept to explain the determination of interest rates through the demand and supply of money. He states that the money demand is dependent on interest cost foregone by not holding

bonds, stocks, or other liquid assets. In the Keynesian analysis, interest is a cost for foregone liquidity. Keynes states that money is considered the greatest liquid asset, for instance, the easier an asset can be converted to money, the more liquid the asset is. In this theorem, demand for money is resolute by three motives which are the motive for transactions, motive for precautions, and the motive for speculations. In the motive for transactions, he states that people want liquidity as an assurance to elementary transactions since their income is not regularly obtainable. The amount of liquidity required is resolute by the level of income and the two have a direct relationship. The motive for precautions states that people need liquidity to cover for the social unexpected events that need unusual spending. A speculative motive is a situation where liquidity is required to cover the anticipated future events and spending like foreseeing a fall in interest rates leading to holding more money. This can be presented graphically where the interest rate is resolute by the interface of the money supply curve and the money demand curve, that is, where the demand for money equals the money supply. Banks' liquidity greatly depends on these motives, and agency and mobile banking contribute directly to enhancing the motives that are through their services. This theory is relevant because it will help the researcher understand what leads to transactions from various bank customers through agency and mobile banking and the desire of banks to remain liquid.

2.2.4 Technological Acceptance Model

This model shows the way those using technology gradually come to accept and embrace it. The end-user point that is the actual system use leads to the formation of Behavioral intention (BI) which is a factor in leading people to use this new technology. BI is influenced by attitude (A) which is the all-purpose impression of the technology. According to Warshaw et al (1989), this model on technological advancement suggests that when those using technology are presented

with new technology, there are aspects that determine when and how technology will be used which are; PU, PEOU, and external variables. According to Davis (1989), PU is the extent to which people are certain that using a specific technology system would boost job performance. Davis also defined PEOU as the extent to which a person is certain that using a certain technological system would be very easy. This means that if the technology is easy to use then the barriers are dominated and if otherwise, no one will have a positive attitude towards it. He also said that other external variables influence attitudes like social influence, age, and gender. The importance of this theory is that it will help us understand the process of adapting to new technological inventions and developments like agency and mobile banking as well as ensure a better prediction of the use of new information.

2.3 Commercial Banks' Liquidity Determinants

Agency and mobile banking contribute both directly and indirectly to liquidity levels within the banking industry. Agents who are appointed to act on behalf of the banks provide services like deposit-taking transactions that inject cash to the banks enhancing liquidity. Mobile banking on the other hand has overgrown to overtake agency banking. Most of the population in the world own or have access to a mobile phone device meaning that a greater percentage can access their banks through phone and carry out transactions that will directly impact liquidity. Banks have partnered with mobile money providers like Safaricom's Mpesa where money can be moved easily between the Mpesa platform and the bank accounts. Liquidity is influenced both by bank-specific factors and microeconomic factors. Factors specific to a bank can include profitability, bank size, and capital adequacy.

2.3.1 Regulatory Policies

Commercial banks are required by the law to keep a specified percentage of their client's total deposits at the CBK called the Cash Reserve Ratio (CRR). This is to enhance the CBK's ability to adjust the money in the market by either increasing or decreasing the ratio. Increasing the ratio means increased money in the market and the opposite holds. The CRR deposits are held at CBK at zero interest. The current CRR rate is at 5.25% of all banks' total domestic and foreign deposits liabilities. To facilitate the bank's liquidity management, the CBK requires that they maintain the CRR from the 15th day of the previous month to the 14th of the current month and that the CRR should not fall below 3%. CBK also requires that commercial banks be maintaining a liquidity ratio of at least 20%. This ratio depicts the banks' capacity to fund increases in assets and fulfill obligations as and when they are due. According to CBK (2010), the liquidity ratio is considered the most important financial stability indicator. CBK regularly monitors the banking sector on liquidity and credit risks.

2.3.2 Bank Size

According to Laeven et al (2014) states that bank size can be measured as the natural logarithm of all the identifiable assets. Bank size can also be measured using total revenue or equity capital corresponding to the book value of the bank. A large bank will tend to attract more clients hence increased overall levels of liquidity. Haan et al (2011) established that bank size reduces return volatility. Other considerations in measuring bank size are market capitalization, number of employees, number of customers, number of branches, and risk-weighted assets.

2.3.3 Capital Adequacy

Capital adequacy is the legal minimum reserves a bank or other financial institution must have existing. Capital adequacy is determined by a ratio known as CAR. CAR is also known as CRAR. The ratio is regulated with the intention to assure depositors, increase stability and efficiency in banks and other financial systems. Nyaundi (2015) carried out research on the effects of CAR requirements on the commercial banks' liquidity within Kenya and established that capital adequacy favored commercial banks in terms of deposits and loans from CBK hence a positive relationship between the variable and liquidity.

2.4 Empirical Studies

Shyam et al. (2019) examined the factors influencing commercial banks' liquidity in India as a country. Their research involved a review of the lasting effects of various regulatory authorities, banks' definite and macroeconomic factors that determine a bank's liquidity in India. The research used randomized effect panel data regressed model tested it against data collected from the Indian banks for twenty-one years since 1996. The model specification takes into consideration the impact of regulatory authority factors, cash reserves, and liquidity directives. It integrates four dissimilar liquidity ratios relating specifically to banks in India. Findings showed a contrasting relationship between the variables which were determined by liquidity ratios. The research concluded that banks in India depend on liquidity based on assets and less on liquidity based on liability. The ratio of liquid assets to the total assets showed substantial relations with macroeconomic factors which included the interest rate charged on call loans, forex reserves, discount rates, forex rates, GDP, and CPI. The ratio also disclosed a substantial association with bank definite variables of the size of the bank and its capital to total assets. The regulatory authority factors which include cash reserves and bank profitability as dictated by ROE did not

affect banks' liquidity. The researcher is trying to establish the determinant of liquidity but in the current study under review, the independent variables are more specific with liquidity.

Shah et al. (2018) conducted a study on the factors affecting liquidity in the Pakistan banking sector. The research was carried out between 2007 and 2016 and a sample of 23 banks was used by adopting pertinent econometric stipulations. Results revealed that internally induced forces like CAR, bank size, and cost of funds are statistically important but related in a different way to the liquid asset over the total asset and to total loans over total deposits correspondingly. It was also confirmed that macroeconomic aspects for instance the GDP are statistically important but influence the liquidity of banks in a different way. Another macroeconomic factor, unemployment, was found out to impact banks' liquidity but in the first measure of banks' liquidity, it was statistically substantial and in the second measure of banks' liquidity, it was statistically inconsequential. Lastly, the findings exposed that the profitability of banks is insignificantly associated with liquidity whereas the association between bank deposits and bank liquidity is negative and statistically substantial. In the current study, the researcher will be more specific on the two independent variables chosen unlike in the research examined above.

Bonner et al. (2015) researched on liquidity cushions of banks and the liquidity directives roles in 30 different countries. Data from the three countries was used to determine the findings and the results expressed that, the relationships of liquidity cushions of banks for instance the liquid assets over the total deposits and the liquid assets over the total assets to the deposits, the concentration of markets, and size of a bank are considerably weak for countries with guidelines on the liquidity of banks. It was concluded that liquidity guidelines can be substituted for the dynamic management of banks. The consequence is that liquidity regulation directives guide banks in risk optimism behavior hence mitigation of excessive risk.

Kashyap et al. (2002) conducted a study on banks as liquidity providers. The researchers took into consideration the key two functions relating to banks, that is, deposit acceptance and loan granting as the functions that necessitate banks to maintain liquidity cushion to contain customer withdrawal demand. The reason is that permitted lending or line of credit is of less impact compared to a current account with insufficient funds to withdraw since the customer's right to withdrawal is catered for. This study is using a bank as an independent variable and liquidity as the dependent variable. In this case, other organizations that benefit from banks' liquidity will be their respondents. Banks have to take measures to deal with liquidity problems to enhance their operations. The research was carried out in the US and involved various banks within the fed system of banking. The study is analyzing banks as liquidity providers whereas the current study is trying to determine how some aspects of banking affect their liquidity.

Njiru (2016) carried out research on how electronic banking impacts commercial banks' liquidity in Kenya. All the banks in Kenya of commercial nature as of the year 2015 were involved in this research. Regression analysis was adopted to determine the association between electronic banking and liquidity in Kenyan commercial banks. The researcher concluded that there was a positive significant association between the electronic form of banking and the liquidity of commercial banks. Electronic banking is composed of internet banking, ATM banking, Mobile banking, and POS banking. All these variables were found to have a positive relationship with liquidity independently. The focus here is on how electronic components of banking influence the liquidity level of banks. In the current study under consideration, the researcher is trying to find out the influence of agency and mobile banking specifics on banks' liquidity in Kenya, and the main reason being that they are mostly used hence chosen for review.

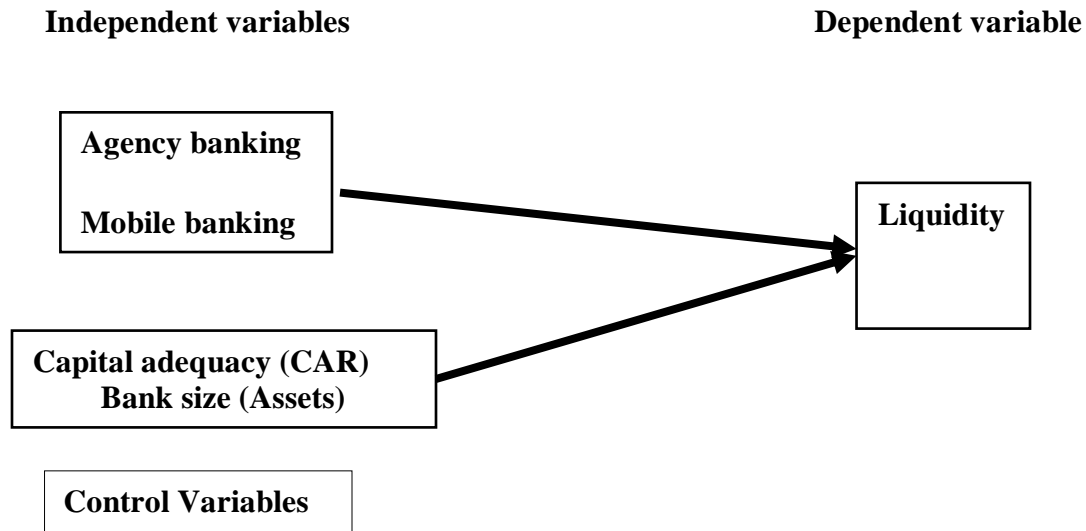
Nyaundi (2015) researched how CAR requirements for banks influence commercial banks' liquidity in Kenya. Using descriptive statistics, correlation, and linear regression, the researcher was able to establish that a strong positive correlation existed between banks' liquidity and CAR, bank size, and GDP of the forty-three banks within Kenya. Data used in this research was sourced from secondary avenues. According to the researcher, liquidity is a very important factor since a deficit of liquidity in one bank can result in a systematic crisis in a country's banking sector due to the interrelation of banks' operations. In the current research under consideration, the researcher is trying to establish whether the agency and mobile banking have an influence on the liquidity of banks in Kenya. This area is under-exploited hence a good avenue to conduct research.

Dianga (2014) researched how the use of agency banking influences the financial performance of commercial banks within Kenya. Regression and correlation analysis was employed to evaluate the data collected and from the findings, it was concluded that the agency form of banking had a positive relationship to the changes in banks' financial performance. The population included Kenya banks up to the year 2013. The relationship was exhibited between financial performance as measured by ROE and total assets. The researcher further explained that through agency banking, banks can invest in more assets and utilize the existing infrastructure efficiently improving performance in banks. There has also been an increased implementation of agency banking leading to a wider customer base and increased revenue. Agency banking has also greatly contributed to an improved intermediation process. The dependent variable in this study is financial performance but in the current study under consideration, the dependent variable is liquidity.

Mutua (2012) researched the effect that mobile banking has on the financial performance of banks within Kenya. The population and sample comprised all the commercial banks as of 2011 and regression analysis was adopted to establish the association between mobile banking and commercial banks' financial performance. From the findings of the research, it was established that mobile banking had a great impact on the performance of banks, that is, there was an association between mobile banking and banks' financial performance. It was further explained that the use of mobile banking has helped banks in the reduction of unnecessary costs, increased efficiency, and improved service delivery. The variables of the study are mobile banking as independent and financial performance as the dependent. The current study under consideration uses mobile banking and agency banking as predictor variables and liquidity as the response variable.

Maore (2006) carried out research on the influencers of liquidity of commercial banks within Kenya and used a regression analysis to explain associations amongst variables under study. The researcher's primary attention was entirely on an analysis of thirty banks in Kenya. The findings showed that important aspects that influence the liquidity of the commercial banks in Kenya are the growth of liquid liabilities and their maturity. It was concluded that liabilities that are liquid and their maturity had a positive relationship with liquidity while their growth had an opposite relationship. Other factors like assets that are liquid and cashflows had a positive but inconsequential influence on liquidity whereas bank size, bank profitability, leverage, and loan obligations had an inconsequential negative association to liquidity. Agency and mobile banking contribute to both liquid assets and liabilities but they are not fully exploited at individual levels hence the broader view on them under the current research under study.

2.5 Conceptual Framework



Camp (2001) explained that it is the structure designed by a scholar to explain the conceptual development of the phenomenon under study. Pashkin (1993), states that a conceptual framework involves the theories, concepts, and empirical research used in promoting and synthesizing the knowledge adopted by the researcher. Mobile and agency banking are the independent variables in this study and are interrelated to liquidity which is the dependent variable. Since other aspects can impact the relationship and effect, the researcher provided for the accommodation of other variables as moderators. These variables are CBK regulations that influence both the dependent and independent variables. CBK directly regulates the operations of banks and maintains the required liquidity levels as well as determines the services offered by banks through mobile banking and agency banking as well as their operations. Capital adequacy, profitability, and bank size are other ratios that are likely to influence a bank's liquidity. Banks with good capital adequacy ratios, good profits, and large asset sizes tend to

attract more deposits and this means more transactions hence more revenues contributing directly or indirectly to liquidity levels.

2.6 Summary of the Literature Review

This section comprises theoretical, empirical, and conceptual frameworks that are related to the study under consideration. It is evident from the empirical review that few studies have been done in this area of research and mostly in Kenya as a country. Most of the studies done relate to the independent variables and the dependent variables but on different aspects and doing this research will be of benefit to commercial banks and all parties involved with them. Most banks are embracing mobile and agency banking hence the need to evaluate their effectiveness. It is the difference between deposits and withdrawals that matters in this case. Every bank needs to be liquid for efficient and effective operations. This makes it necessary for the study to be conducted to understand the influence of agency and mobile banking on commercial banks' liquidity in Kenya. There is also an upsurge of banks being put under receivership or being acquired due to financial difficulties in meeting their obligations.

CHAPTER THREE: THE RESEARCH METHODOLOGY

3.1 Introduction

According to Brown (2006), research methodology is a metaphysical framework within which research is conducted or a basis of research. The research methodology section allows the users of research finding to critically evaluate the study's validity and reliability. It involves specific procedures or techniques used in the identification, selection, processing, and analyzing of information about a research topic. This chapter, therefore, spearheads the results of a research paper. Chapter three which is the research methodology will comprise the design of the research, study population, the design sample, ways of collecting data, and techniques of analyzing data.

3.2 Research Design

Research design is the overall approach that assimilates the different parts of a study in a comprehensible and logical way to ensure that the research problem is answered to satisfaction. It is an outline of the collection, measurement, and analysis of data relating to the problem of research. In this study, descriptive research design will be used because it will help in describing the phenomenon under study, understanding it, obtaining information for answers to the research problem and the status of the phenomenon, and describing what exists between the variables under study. Relating this to the research topic, that is, the impact of agency and mobile banking on the liquidity of commercial banks within Kenya, a descriptive research design was considered the most suitable.

3.3 Population

Population according to McIntosh et al. (2014) refers to the entire pool from which a sample gets carefully chosen. It may also refer to a set of objects, people, measurements, or events. The

target population included all the commercial banks within Kenya up to the year 2020. According to CBK, there were forty-three banks in Kenya and the researcher decided to use all of them as the sampling frame. The data for analysis will range from the year 2016 to 2020.

3.4 Data Collection

The research will involve the use of data extracted from secondary sources which are the CBK reports, bank's audited financial statements, journals, and banking industry data from KBA and other platforms. The researcher will collect data for five years starting from the year 2016 to 2020 to ensure completeness and consistency in results. Data for liquidity computation will be based on the information from the bank's financial statements. Information from KNBS and CAK will also be part of the data collected and analyzed.

3.5 Data Analysis

3.5.1 Diagnostic Tests

To find out the effect of agency and mobile banking on the liquidity of commercial banks within Kenya, diagnostic tests which include descriptive analysis, correlation, and regression analysis will be used. This will be successfully supported by the use of data analysis software's namely Stata and SPSS. Predictor variables will be regressed against the response variable so as to determine the nature of the relationship and the regression model constants, coefficients, and the error term if any.

3.5.2 Analytical Model

The following model forms a regression analysis meant to explain the association between agency and mobile banking, and liquidity.

$$Y_t = \alpha + \beta_1 X_{1t} + \beta_2 X_{2t} + \beta_3 X_{3t} + \beta_4 X_{4t} + \varepsilon_t$$

Where;

Y_t = Liquidity of banks calculated by dividing a bank's liquid assets by its current liabilities in time t .

α = Y-intercept of the regression model where the independent variable has no impact on the dependent variable.

X_{1t} = Agency banking calculated by dividing the transaction value of agency banking against the total value of transactions in a bank in time t .

X_{2t} = Mobile banking is calculated by dividing the transaction value of mobile banking against the total value of transactions in a bank on time t .

X_{3t} = Size of the bank measured by logarithm of assets in time t .

X_{4t} = CAR calculated by dividing capital of a bank over its risk-weighted assets in time t .

ε_t = Error term representative of differences in the response variable that is not explained by the predictor variable in time t .

$\beta_1, \beta_2, \beta_3, \beta_4$ are regression coefficients as determined from the model simulation.

t is annualized in this analytical model

3.5.3 Significance Tests

The researcher will use significance tests to compare observations from the research with the purported relationships between the variables under study. The study will evaluate the results at a stipulated 95% confidence level and a significance level of 5 %. In addition, the researcher will use the coefficient of determination (R^2), coefficient of correlation (R), F tests, and ANOVA.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This part is an outline confirming the plan laid out in the previous chapter. It comprises data validation, components of descriptive statistics, correlation analysis, regression analysis, and discussions from the research findings. The data used in this research for analysis was collected from secondary sources which include the CBK, KBA, KNBS, and local newspapers in Kenya. The data was in form of reports and audited financial statements submitted to the CBK on a yearly basis by banks. The data was used to determine the effects of agency and mobile banking on the liquidity of commercial banks in Kenya.

4.2 Commercial Banks in Kenya by Market Share.

Table 4.1 Markets Share of Commercial Banks

Ownership and Asset Base of Commercial Banks (Ksh. Millions)				
Ownership	Number	% of Total	Total Net Assets	% of Total
Local Public Commercial Banks	2	5.1	30,108	0.6
Local Private Commercial Banks	20	51.3	3,613,451	66.8
Foreign Commercial Banks	17	43.6	1,762,188	32.6
Total	39	100.0	5,405,747	100.0
Source: Research finding, 2021.				

As of 2020, there were thirty-nine commercial banks operating in Kenya as shown in table 4.1 above. Local banks had a total asset base of 67.4% while foreign-owned banks had an asset base of 32.6%. Local banks comprised of two public banks and twenty private-owned banks. The foreign banks were seventeen in number. Three banks have been excluded which are Charterhouse Bank, Imperial Bank, and Chase Bank Limited because they were under statutory management and receivership respectively.

4.3 Data Validity

The research was solely dependent on secondary data. It is to the researcher's believe that since this data was from the banks audited financial statements, it was a fair representation of the true and fair view of the banks' operations for the selected years for this research. The data has been made available for public use for the purpose of making useful economic decisions about the banks in Kenya. The CBK which is a major bank regulator in Kenya uses the data in making decisions that influence the banks' operations and this is an assurance that the data is reliable.

4.4 Descriptive Statistics

Descriptive statistics was used to summarize the research findings and it comprises means, standard deviations, coefficient of variation, variances, kurtosis, and skewness for each study variable, that is, liquidity, agency banking, mobile banking, bank's assets, and CAR.

Table 4.1: A table showing descriptive statistics for the variables

Stat	Mean	Std. Deviation	Coefficient of variation	Kurtosis	Skewness	Variance	Min	Max
Liquidity (Ratio)	.33191	.18856	.5681	3.0096	.(0383)	.03556	.05687	.7888
Agency (Ratio)	.45786	.08347	3.503	20.404	4.163	.00697	.02100	.3801
Mobile (Ratio)	.59946	.088842	1.36861	5.499834	1.771822	.00789	.3660	.6450
Assets (Log)	4.0829	.064963	.406173	4.889106	(1.76630)	2.750155	4.1400	5.7031
CAR (Ratio)	.19324	.004489	.567808	3.047597	(.098509)	.0120395	.16272	.45735

Source: Research finding, 2021.

From table 4.2, liquidity had a mean of .3319 (33.19%), a standard deviation of .1886, coefficient of variation of .5681, kurtosis of 3.010, skewness of (.0383), a variance of .0356, a minimum of .0569, and a maximum of .7888. Agency banking had a mean of .4579, a standard deviation of .0835, coefficient of variation of 3.503, kurtosis of 20.40, skewness of 4.163, a variance of .00697, a minimum of .2100, and a maximum of .3801. Mobile banking had a mean of .5500, a standard deviation of .0888, coefficient of variation of 1.3686, kurtosis of 5.4998, skewness of 1.7718, a variance of .00789, a minimum of .3660, and a maximum of .6450. Assets had a mean of 4.0829, a standard deviation of .0650, coefficient variation of .4062, kurtosis of 4.889, skewness of (1.7663), a variance of 2.7501, a minimum of 4.14, and a maximum of 5.7031. Lastly, the capital adequacy ratio had a mean of .1932, a standard deviation of .0045, coefficient of variation of .5678, kurtosis of 3.0476, skewness of (0.09851), a variance of .01204, a minimum of .1627, and a maximum of .04574.

4.5 Correlation Analysis

The researcher used the Pearson product-moment correlation coefficient to measure the strength and direction of association that existed between the dependent and independent variables under study. Statistically, the Pearson moment of correlation can take values that range from -1 to +1. A value of approaching or equal to -1 means that the variables are highly negatively correlated while a value approaching or equal to +1 means that the variables are highly positively correlated. A value of 0 means that there is no relationship at all between the dependent and independent variables.

Table 4.2: Pearson correlational analysis between the dependent and independent variables.

Correlations		Liquidity (Ratio)	Agency (Ratio)	Mobile (Ratio)	Assets (Ratio)	CAR (Ratio)
Pearson Correlation	Liquidity (Ratio)	1.000				
	Agency (Ratio)	.0974	1.000			
	Mobile (Ratio)	.1573	.6141	1.000		
	Assets (Ratio)	.6605	.2257	.4778	1.000	
	CAR (Ratio)	.6528	(.0280)	.0377	.5770	1.000
			.0140*	.0000*	.0000*	.0000*

Source: Research finding 2021.

The aim of this research was to determine the effects of agency and mobile banking on the liquidity of commercial banks in Kenya. From the results in the table above on Pearson's product-moment correlation coefficient, the researcher is able to give an opinion based on these results. Agency banking had a weak relationship with a correlation coefficient value of 0.0974 which was statistically insignificant at 0.088(sig,1 tailed) since the value 0.088 is more than the set significance level of 0.05. Mobile banking had a weak positive relationship with a correlation coefficient of .1573 which was statistically significant at 0.014(sig,1 tailed) since the value 0.014 is less than the set significance level of 0.05. The asset variable had a strong positive relationship with liquidity at 0.6605 which was statistically significant at 0.0000(sig,1 tailed) since the value

0.0000 is less than the set significance level of 0.05. CAR had a strong positive relationship with liquidity at 0.6528 which was statistically significant at 0.0000(sig,1 tailed) compared to the set significance level of 0.05.

4.6 Regression Analysis

Regression analysis was conducted by the researcher to determine whether the best line of fit could be drawn, that is, whether the agency and mobile banking had an effect on liquidity in Kenyan commercial banks. This can be referenced in the table below.

Table 4.3: Table showing the regression model summary analysis.

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig F Change
1	.7447 ^a	.5546	.5453	.12715543	.0000
a. Predictors: (Constant) AGENCY, MOBILE, ASSETS, CAR					
b. Dependent Variable: LIQUIDITY					

The coefficient determination was at 74.47% and this evidenced the strong positive relationship between agency and mobile banking against the liquidity of commercial banks. There was a variation of 55.46% explained by variations in agency banking, mobile banking, change in bank assets, and CAR at a 95% significance level. It is therefore evident that there is a strong relationship between the dependent and independent variables since 54.53% of the changes in

liquidity are caused by changes in agency banking, mobile banking, CAR, and bank assets. The aim of regressing was to determine whether the model can form a line of best fit and since the model used in the study is a perfect fit, this means that there is support for the belief that agency banking and mobile banking have an effect on the liquidity of commercial banks in Kenya.

Table 4.4: ANOVA model analysis on the variables under study.

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	3.82582199	4	.956455497	.0000	.0000 ^b
	Residual	3.07201571	190	.016168504		
	Total	6.8978377	194	.035555864		
a. Dependent Variable: LIQUIDITY						
b. Predictors: (Constant), AGENCY, MOBILE, ASSETS, CAR						

The model was significant in explaining the research finding, that is, it has a 0.000 value which is less than 0.05. This, therefore, means that all the errors to the model were catered for and that it is unlikely for the model to give wrong results. Therefore, agency banking, mobile banking, banks' assets, and CAR moderately influence liquidity.

Table 4.6 Table showing coefficients for the research model.

Model	Unstandardized Coefficients		Standardized Coefficients	Sig.	T.	95.0% Confidence Interval for B		Tol.	VIF
	B	Std. Error	Beta			Lower Bound	Upper Bound		
1 (Constant)	.005652	0.024812		.000	-2.67	-0.05459	0.04329		
AGENCY	.0001065	0.000106	0.0619	.088	1.01	-0.00010	0.00032	0.620	1.613
MOBILE	-.0001688	0.000092	-0.1280	.014	-2.98	-0.00035	0.00001	0.479	2.086
ASSETS	.0554527	0.008132	0.4877	.000	6.82	0.03941	0.07149	0.458	2.182
CAR	.6492032	0.108119	0.3778	.000	6.00	0.43594	0.86247	0.592	1.689

The model that was obtained from the regression analysis is as follows;

$$Y_t = -0.0056517 - 0.0001688X_{2t} + 0.0554527X_{3t} + 0.6492032X_{4t}$$

When all other variables are assumed constant, the liquidity of commercial banks in Kenya is at (0.0056517). From the regression model, we can deduce that mobile banking, bank assets, and capital adequacy ratio were significant at 0.014, 0.000, and 0.000 respectively whereas agency banking with 0.088 was insignificant in determining commercial banks' liquidity. A unit increase in mobile banking will decrease liquidity by 0.0001688. Since most of the bank customers have an access to banking services via phone, it is a true reflection when withdrawals are more than

deposits. Liquidity also increases by 0.0554527 when there is a change in bank assets by one unit. This implies that the more liquid bank assets a bank will own, the more the levels of liquidity. Lastly, a unit increase in CAR will increase levels of liquidity by 0.6492032. This implies that higher levels of capital adequacy ratio mean more liquid assets hence high liquidity.

4.7 Discussion of Research Findings

According to the findings from the research carried out, the liquidity of commercial banks moderately depends on agency banking, mobile banking, assets owned by banks, and the banks' capital adequacy ratio as determined at a 95% confidence level of statistical significance. The coefficient of determination was .5546; this means that all the variables under study contributed partially to the liquidity levels within the banking industry. From the results, it is evident that the value of deposits is more than the withdrawals. Most people prefer to deposit and withdraw through agents and mobile phones to avoid the long queues in banking halls and also it is a more convenient process compared to visiting banks. Using of mobile banking services by banks in serving their clients contributed positively to the decrease in banks' liquidity levels. This means that the value of withdrawals through mobile banking exceeds the value of deposits hence the negative effect on liquidity. The interconnectivity between mobile banking and MPESA has enhanced this since money can be moved two ways and this keeps banks afloat. Withdrawals also increase since the money is easily accessible and can be used without complicated procedures which include physically visiting a bank. The value of assets that are owned by a banking institution influences liquidity positively. These assets can be grouped as long-term and current and the latter contributes more to positive liquidity since they are the ones considered in liquidity computation. Assets generate cashflows into a business and this explains why banks are able to increase their liquidity through owning them. Lastly, the capital adequacy ratio of

commercial banks positively increases liquidity. This is because of the relationship between a bank's capital and current liabilities and assets. CAR caters to insolvency issues that might arise from banks dealing with its customers and enhances banks' ability to remain liquid while carrying out its core objectives.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The chapter will give an overview of the summary, conclusion, recommendations, limitations of the study, and areas for further research. They are all relating to the study topic which had an objective; to determine the effects of agency and mobile banking on the liquidity of commercial banks in Kenya. The data from the research findings were used to form the summary and conclusions and also determine the most viable recommendations and areas of interest that may be of benefit to the banking industry.

5.2 Summary of Findings

The main objective of the study was to find out the effects of agency and mobile banking on the liquidity of commercial banks in Kenya. It involved the use of agency banking, mobile banking, banks' assets, and CAR as the independent variables in relation to liquidity as the dependent variable. It can be concluded from the findings that all these variables influenced the liquidity of banks in general. CAR had the highest impact as it led to increased liquidity of the bank. This means that there was a positive significant relationship between CAR and banks' liquidity levels. A unit increase in CAR increased liquidity by 0.6492. Mobile banking, bank assets, and capital adequacy ratio changed liquidity by (0.0001688) and 0.0554527 respectively. In detail, this means that mobile banking negatively influences liquidity whereas bank assets and capital adequacy increase liquidity levels. The study established that banks assets had a positive significant effect on liquidity. Mobile banking also negatively but significantly influenced the liquidity of banks. Agency banking was found to have an insignificantly positive relationship to the liquidity of commercial banks.

Mobile banking, bank assets, and capital adequacy ratio were significant in establishing the effect of agency and mobile banking on the liquidity of commercial banks in Kenya. The variables were significant at 0.014, 0.000, and 0.000 respectively. Even though agency banking was insignificant in the researcher's model, it is an essential aspect in ensuring customer satisfaction and enhancing customer loyalty. The coefficient of determination of 74.47% shows a relationship between agency and mobile banking and liquidity of commercial banks. An R square of 55.46 evidenced the explanation for the model's variance in respect to the variables. In summary, the data from the research analysis established that there was a moderate positive relationship between the independent and dependent variables.

5.3 Conclusion

The researcher can conclude from the finding that all the independent variables had an influence on liquidity. There was a moderate and statistically proven positive relationship between agency and mobile banking to the liquidity of commercial banks. CAR had the highest impact as it was found to increase liquidity significantly other factors held constant. Banks should therefore ensure that the recommended CAR by the CBK is maintained or exceedingly high to enhance its liquidity levels. Banks' assets were found to increase or contribute to increased liquidity levels similarly to mobile banking. Agency banking negatively influenced liquidity based on research data findings. This is statistically represented by an R-Square of 55%. Other than agency banking, all the other variables significantly influenced the liquidity of commercial banks.

The total change in liquidity is well explained by the research results which are attributed to the use of agency and mobile banking in the modern banking industry. Agency and mobile banking are part of the continued improvement of technological processes to automate most of the banking services and increase customer satisfaction, customer base, bank profits, convenience,

and accessibility, reduce congestion in banking halls, save time and promote bank growth. When the two are combined, they influence the banks' liquidity and this is explained by the moderate positive relationship between agency and mobile banking and liquidity. Banks should therefore embrace these forms of banking and it is to the researchers believe that a similar study done after that will give better results. Mobile banking, bank assets, and CAR had a significant effect on the liquidity of commercial banks. The researcher can therefore conclude that these variables influenced liquidity and banks should always put them into consideration when planning for liquidity management measures. Since liquidity is key to effective operations, it is therefore to their benefit that this study will help them anticipate it.

5.4 Recommendations

Banks should invest more in mobile banking and moderately in agency banking so as to increase their liquidity levels. This will also attract more customers and in the process create a strong asset base for them which will ultimately lead to increased liquidity. Growth in bank assets means an increased size of the banks and subsequently increased liquidity hence banks should invest more in the expansion so as to increase liquidity. Agency and mobile banking can help banks tap more customers and this will enhance their client base as well as productivity. In the long run, their performance in terms of profitability and growth will be enhanced.

Banks should also maintain or exceed the set levels of CAR by CBK so as to increase their liquidity levels. Enhanced liquidity means the ability to meet obligations as and to when they fall due and by this, banks' operations will be efficient and effective. Since capital adequacy ratio involves the use of risk-weighted assets to measure a bank's risk exposure, it is to a bank's

benefit if capital adequacy ratio regulations are observed to ensure that banks have enough capital on reserves to handle a percentage of losses before being at a risk reaching insolvency.

5.5 Limitations of the Study

The study mainly depended on trimmed secondary data which brings in the question of data accuracy and precision. Human nature is prone to errors and perfection remains the big question. The objective of the data use might have been different and not specifically what the researcher did as part of the research paper and this means that the data might not fully answer the research question. The analysis and data related to only 39 commercial banks and left out other financial and non-financial institutions. To generalize fully the effect on agency and mobile banking in the banking industry, all these institutions need to be accommodated.

The research also did not cover all the factors that influence liquidity as there are other many factors that may directly or indirectly influence banks' liquidity. The study period was also a limitation as the research related to five years, that is, from the year 2016 to 2020 because of the timelines and budget constraints. To add on, the levels of technology are growing and most banks are still implementing the use of agency and mobile banking limiting our years of study to the most recent. Covid-19 was also a big challenge as it came about when the research had kick-started. It affected or modes of communication and consultation as people were not required to meet in person. Another challenge as a result of the virus is that Universities closed down for some time and this inconvenienced the researcher specifically on the aspect of time.

5.6 Suggestions for Further Research

A similar study should be done for other sectors other than banking institutions and also on the excluded financial and non-financial institutions. The area of liquidity is wide and other

researchers can also determine how other factors other than agency and mobile banking influence liquidity. Banks also do borrow loans from CBK for them to remain afloat and this means that loans might be a factor in the change of liquidity levels. Most banks are embracing the use of mobile banking through partnerships with mobile service providers and through the development of their own subscriber lines and apps. Liquidity can also be looked upon from other aspects like customer base and bank coverage measured as the level of availability in various counties in Kenya.

A study can be done on the resulting impact on the use of mobile banking other than on the liquidity aspect. Research can also be done to determine whether agency and mobile banking have an effect on other factors like growth and profitability. Research can also be done to establish how a bank's growth is related to liquidity and whether the agency and mobile forms of banking contribute to the growth. Researchers can also study the various ways liquidity can be improved other than the ones under consideration. A similar study can also be done on other financial and non-financial sectors so as to establish whether the variables under study have the same effect on their operations.

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APPENDICES

Appendix I: list of commercial banks in Kenya as at 31st December, 2020

- 1 KCB Bank Kenya Ltd
- 2 Equity Bank Kenya Ltd
- 3 NCBA Bank Kenya PLC
- 4 The Co-operative Bank of Kenya Ltd
- 5 Absa Bank Kenya Plc
- 6 Standard Chartered Bank (K) Ltd
- 7 Diamond Trust Bank Kenya Limited
- 8 I&M Bank Limited
- 9 Stanbic Bank Kenya Ltd
- 10 Bank of Baroda (K) Limited
- 11 Prime Bank Ltd
- 12 National Bank of Kenya Ltd
- 13 Citibank N.A. Kenya
- 14 Family Bank Ltd.
- 15 Bank of India
- 16 Ecobank Kenya Ltd
- 17 SBM Bank Kenya Ltd
- 18 HFC Ltd
- 19 Bank of Africa Ltd
- 20 Victoria Commercial Bank Limited

- 21 Guaranty Trust Bank Limited
- 22 Gulf African Bank Limited
- 23 African Banking Corporation Ltd
- 24 Sidian Bank Ltd
- 25 Habib Bank A.G Zurich
- 26 Credit Bank Ltd
- 27 Guardian Bank Limited
- 28 First Community Bank Ltd
- 29 Development Bank of Kenya Ltd
- 30 UBA Kenya Bank Ltd
- 31 M Oriental Commercial Bank Limited
- 32 Consolidated Bank of Kenya Limited
- 33 Paramount Bank Ltd
- 34 Transnational Bank Limited
- 35 DIB Bank Kenya Ltd
- 36 Middle East Bank (K) Ltd
- 37 Mayfair Bank Ltd
- 38 Jamii Bora Bank Limited
- 39 Spire Bank Limited
- 40 Charterhouse Bank Ltd
- 41 Imperial Bank Ltd
- 42 Chase Bank (K) Ltd

Source: CBK Annual report 2021.

Appendix ii. Data collection form

THE EFFECT OF AGENCY AND MOBILE BANKING ON LIQUIDITY OF COMMERCIAL BANKS IN KENYA									
NAME OF BANK:									
TYPE OF BANK:									
		Local public	Local private	Foreign owned					
YEAR	Assets capacity (Millions)	Transaction value of Agency banking (Millions)	Transaction value of Mobile banking (Millions)	Risk Weighted assets (RWA) (Millions)	Total capital (TC) (Millions)	Current Assets (CA) (Millions)	Current liabilities (CL) (Millions)	Total deposits (TD) (Millions)	Total withdrawals (TW) (Millions)
2016									
2017									
2018									
2019									
2020									