

**EFFECTS OF LIQUIDITY RISK ON PROFITABILITY OF
COMMERCIAL BANKS IN KENYA**

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DECLARATION

This research project is my original work and has not been presented for award of any degree in any University.

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DEDICATION

This research project is dedicated to my family and friends for their support throughout our course.

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First and foremost I thank the almighty God, to whom all knowledge and wisdom has come from and for sustaining us in good health throughout the study period.

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ABSTRACT

The objective of this study was to determine the effect of liquidity risk on profitability of commercial banks in Kenya. The research used a descriptive survey research design. The descriptive survey was ideal because it ensured thorough description of the situation ensuring least possible bias in data collection. The study made use of secondary data collected from annual reports submitted to the CBK for the target population comprised of all the commercial banks in Kenya. Summaries of data findings together with their possible interpretations were presented using tables, charts, correlations, standard deviations and regression. The study found out that mean of current ratio is relatively high as compared to other variables. The current ratio also had the highest standard deviation. The current ratio had the highest correlation with the net interest income followed by the liquidity ratio. From the regression equation the study concluded that a unit increase in current ratio, liquidity ratio and deposits would lead to improvement on net interest income. Therefore; the study recommends that; liquidity risk should always be taken in to account to improve the banks return as measured by net interest income and hence the performance of the banks. Policy makers should also undertake to understand risks affecting the operations of the commercial banks to maximize performance.

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ABBREVIATIONS

CBK Central Bank of Kenya

KNBS Kenya National Bureau of Statistics

NIM Net Interest Margin

OMO Open Market Operations

REPO Repurchase Agreement

ROA Return on Assets

ROE Return on Equity

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The banking industry in general has experienced some profound changes in recent decades, as innovations in technology and the inexorable forces driving globalization continue to create both opportunities for growth and challenges for banking managers to remain profitable in this increasingly competitive environment. The banking system plays a major role in the financial intermediation process of every economy making its efficiency and effectiveness an essential requirement towards ensuring stability and growth (Halling and Hading, 2006). Banks engage in valuable economic activities in order to ensure their survival and profitability. On the asset side of balance sheet banks ensure the smooth flow of funds by lending to deficit spending units while providing liquidity to savers on the liability side. In addition to facilitating trade through the provision of payment and settlement systems, ensuring the productive investment of capital and the profitability of other varied functions according to Jenkinson (2008), exposes banks to a larger number of risks which include liquidity risks, credit risks, foreign exchange risk, market risk, interest rate risk among others.

Lion and Dragos (2006) advice that the primary purpose of commercial banks liquidity is to support other banking functions by maintaining adequate reserve to meet un- anticipated withdrawals and an inventory of near cash funds to satisfy potential credit demands. According to Mishkin and Eakins (2009) managers of banks have to make sure that the

banks have enough ready cash to pay its depositors when there are deposits outflows: that is when deposits are lost because depositors make withdrawals and demand payment. That is the execution of the core mandate of commercial bank with respects to financial intermediation gives rise to an intrinsic risk that lies very deep in their daily operation risk that lies very deep in their daily operation (Bonfim and Kim, 2012)

1.1.1Liquidity Risk

Liquidity risk is a risk arising from a bank's inability to meet its obligations when they come due without incurring unacceptable losses. This risk can adversely affect both bank's earnings and the capital. Therefore, it becomes the top priority of a bank's management to ensure the availability of sufficient funds to meet future demands of providers and borrowers, at reasonable costs. Liquidity risk is the potential for loss to an institution, arising from either its inability to meet its obligations or to fund increases in assets as they fall due without incurring unacceptable cost or losses. Liquidity risk can also be defined as the risk of being unable to liquidate a position timely at a reasonable price (Muranaga and Ohsawa, 2002). Banks face liquidity risk if they are not liquidating their assets at a reasonable price. The price fetching remains precarious due to frazzled sales conditions, while liquidating any of the bank's assets urgently. This may result in losses and a significant reduction in earnings.

The Basel committee on Banking Supervision (2008) defined liquidity as the ability of a bank to fund increase in assets and meet obligations as they come due, without including unacceptable losses. The committee posits that the vulnerability of a bank to liquidity risk usually arises when the bank plays the fundamental role of maturity transformation of short

term deposit into long term loans (the conversion of short term liquid liabilities to long term illiquid assets), both of an institution- specific nature and that which affects market as a whole. Effective liquidity risk management helps ensure a bank's ability to meet cash flow obligations which are uncertain as they are affected by external events and other agent's behavior. Funding liquidity risk and market liquidity according to Decker (2000) is the two main type's liquidity risk. Funding liquidity risk can be defined as the risk that the bank will not be able to meet efficiently both expected and unexpected current and future cash flow and collateral needs without affecting either daily operations or the financial conditions of the firm while market liquidity risk is the risk that banks cannot easily unwind or offset specific exposures without significantly lowering market prices because of inadequate market depth or market disruptions.

The framework for liquidity risk management has three aspects: measuring and managing net funding requirements, market access, and contingency planning. Forecasting possible future events is an essential part of liquidity planning and risk management. The analysis of net funding requirements involves the construction of a maturity ladder and the calculation of the cumulative net excess or deficit of funds on selected dates. Banks should regularly estimate their expected cash flows instead of focusing only on the contractual periods during which cash may flow in or out. For example, cash outflows can be ranked by the date on which liabilities fall due, by the earliest date a liability holder can exercise an early repayment option, or by the earliest date that contingencies can be called. An evaluation of whether or not a bank is sufficiently liquid depends on the behavior of cash flows under different conditions. Liquidity risk management must therefore involve various scenarios.

The "going-concern" scenario has established a benchmark for balance sheet-related cash flows during the normal course of business. This scenario is ordinarily applied to the management of a bank's use of deposits. A second scenario relates to a bank's liquidity in a crisis situation when a significant part of its liabilities cannot be rolled over or replaced - implying contraction of the bank's balance sheet. This scenario relates to many existing liquidity regulations or supervisory liquidity measures. A third scenario refers to general market crises, wherein liquidity is affected in the entire banking system, or at least in a significant part of it. Liquidity management under this scenario is predicated on credit quality, with significant differences in funding access existing among banks. From the perspective of liquidity management, an implicit assumption can be made that the central bank will ensure access to funding in some form.

1.1.2 Profitability of Commercial Banks

Most of the studies concerning bank profitability to date, including Short (1979), Bourke (1989), Molyneux and Thornton (1992), Demirguc-Kunt and Huizinga (2000) and Goddard, Molyneux, and Wilson (2004b), have employed different linear models to estimate the impact of various factors that could be significant in terms of explaining profits. These studies were seminal in demonstrating the feasibility of conducting a meaningful analysis of the determinants of bank profitability, but some of the methods used by these studies failed to take into account the robust and dynamic nature of the economic environment in which they competed. In literature, fundamental measures of bank profitability include return on asset (ROA), return on equity (ROE) and net interest margins ((NIM) usually expressed as a function of internal and external determinants which are mainly influenced by a bank's

management decisions and policy objectives. Return on asset (ROA) is calculated as net profit after tax divided by total assets. Return on equity (ROE) defined as the ratio of net profit after tax to total equity and NIM ratio as ratio of interest income less interest expense to total assets.

1.1.3 Effects of Liquidity Risk on Bank Profitability

According to Crowe (2009) a bank having good asset quality, strong earnings and sufficient capital may still fail if it is not maintaining adequate liquidity. Said and Tumin (2011) consider liquidity risk as an important internal determinant of bank profitability among other firm specific variables such as credit, risk, capital adequacy, expenses management, business diversification, bank size etc. together with industry and macro-economic variables . This is because it can be a source of bank failure and therefore to avoid insolvency, holding a considerable value of liquid aspects with easy transformation into cash becomes very prudent.

Mishkin and Eakins (2009) argue that in order to understand how well a commercial bank is doing, one need to start by analyzing banks' income statement, the description of the sources of income and the expenses that affect the bank's profitability. Molyneux and Thornton (1992) established a weak relationship between the liquidity level and bank profitability while Bourke (1989) finds a strong and positive relationship between them.

According to Iion and Dragos (2006) the management of liquidity risk presents mainly two contrasting views. Primarily an inadequate level of liquidity may lead to the need to attract additional sources of fund with its associated higher costs which reduces profitability and

may ultimately result in insolvency. Conversely an excessive liquidity may lead to a decrease of the return on aspects and in consequence poor financial profitability.

1.1.4 Commercial Banks in Kenya

The financial service industry has in recent times witnessed a tremendous growth in all sectors with commercial banks being the busiest, fastest and the most dynamic. According to the banking survey (2011), the financial sector is well capitalized, very liquid profitable and recording a strong asset growth. The banking system is based on the concept of universal banking where banks offer all banking services. Commercial Banks in Kenya are licensed and regulated pursuant to the provisions of the Banking Act and the Regulations and Prudential Guidelines issued there under. Traditional Banking in Kenyan banks has been on the decline over the years. Although the decline is not pronounced, it reflects a rise in fee based activity in the industry. This result is consistent with world trends where banking systems are slowly increasing fees and commission based revenue (Busch and Kick, 2009).

Additionally CBK in the aim of controlling Commercial Banks' reserves and inflations well as generation of income through government securities; Open Market Operations (OMO) which involves buying or selling of government securities from or to commercial banks by the Central Bank in order to achieve desired level of bank reserve is carried out additionally Repurchase Agreement (REPO) which are agreements between the CBK and commercial banks to purchase/sell Government securities from/to commercial banks at agreed interest rates (REPO rate) for a specified period with an understanding that the commercial bank will

repurchase/resell the security from/to the CBK at the end of the period is also undertaken (CBK,2014).

1.2 Research Problem

The impact of liquidity position in management of financial institution and other economic unit have remained fascinating and intriguing, though very elusive in the process of investment analysis visa- visa bank port folio management. There appears to be an interminable argument in the literature over the years on the roles, meaning and determinants of liquidity risk management. Liquidity refers to the speed and certainty with which an asset can be converted back into money (cash, income) whenever the asset holder desires, money itself is the most liquidity asset o all liquidity management seeks to ensure attainment of the short term objective. A liquid bank is one that stores enough liquid assets and cash together with the ability to raise funds quickly from other source to enable it meet its payment obligation and financial commitment in a timely manner.

According to Ngwu (2006) liquidity is the act of storing enough funds and raising funds quickly from the market to satisfy depositor loan customer and other parties with a view to maintain public confidence. Liquidity is considered as the success of as bank, therefore any ineffectiveness in its management consuetude's a huge problem i.e. it encounter a huge problem that affect the affairs of the financial institution. Bank failures in Kenya have been due to inefficiencies in the management of the liquidity of such bank which in one way or the other had something to do with either liquidity inadequacy or the relative inefficiency in their management. As an institutional problem, it has persisted over the years, in determining the survival or otherwise of banks. Although it must be said that some relative degree of

banking it is believed that any banking institutions that is properly managed and has adequate liquidity should be able to swim above troubled waters.

According to Said and Tumin (2011) revising the determinants of the profitability of banks is an essential subject matter which could help in banks appreciation of the contemporary conditions of the banking industry and the critical factors to be considered in policy formulation for improvement, profitability and growth. Though the Basel committee (1988) had set out regulatory standards for the management of both credit and market risks in the Basel 1 Accord and that for operational risk in the Basel 11 Accord, regulatory standard for liquidity risks were seldom mentioned. Landskronner and Paroush (2008) also indicated that there has been extensive academic and regulatory discussion on major banking risks including credit risk, market risks and operation risk while little attention has been paid for liquidity risk faced by banks and other financial institutions in recent years.

Maina (2011) researched on relationship between the liquidity and profitability of oil companies in Kenya and found that that liquidity management is not a significant contributor alone of the firm's profitability and there exist other variable that will influence ROA. However, it is important for a firm to understand the effect of each of the liquidity components on the firm's profitability and also undertake deliberate measures to optimize its liquidity level. Kweri (2011) researched on the relationship between working capital management and profitability of manufacturing firms listed at the Nairobi stock exchange. The findings of the study were that working capital management affects profitability of the

company and if the firm can effectively manage its working capital, it can lead to increasing profitability.

The studies have not centered on the liquidity risk especially risks arising from the asset side. Liquidity risk may arise due to the breakdown or delays in cash flows from the borrower's or early termination of the projects. Moreover, liquidity risk may also originate from the very nature of banking; macro factors that are exogenous and financing and operating policies that are endogenous (Ali, 2004). As a result of this gap, the current research will seek to answer the following question: what is the relationship between liquidity risk and financial performance of commercial banks in Kenya. The study thus considers liquidity risk as an endogenous variable in the estimation of its effects on bank profitability while controlling for other determinants. The study therefore seeks to analyze the effects of liquidity risk on the profitability (NIM) of commercial banks in Kenya?

1.3 Research Objectives

The objective of the study is to establish the effects of liquidity risks on the profitability of commercial banks in Kenya.

1.4 Value of the Study

The finding of this study will add knowledge and help provide recommendations to mitigate the plight of the business community with respect to access to funding in a period when commercial bank in Kenya is considered to be very liquid while taking into consideration the profit maximization objective.

The research will be a value added process to the study in liquidity especially bringing out factor that influence profitability of commercial bank. Commercial will get to know factors that influence and how adequate management liquidity can also impact profitability. This research will unveil grounds for the analysis of such factor to establish which factors the bank will have direct control over and how.

The findings of study will be used to recommend to managers on the determinants or causes of liquidity risks in considering its effects on banks profitability. It will also assist management of public quoted companies in determining the effect of leverage on the value of their firms so that they can make prudent financial decisions.

The study finding would be significant in the issue of prudential guideline on liquidity that can be used in formulation of policy. The Central Bank of Kenya would use the findings of this research in the establishment of guidelines that will enhance profitability through liquidity management in the banking sector, while protecting the interest of the Kenyan public.

Commercial bank liquidity is the main predictor and indicator of solvency and bankruptcy. Financial consultants will be in the position to understand the variables that influence liquidity position of bank which can lead to profitability and thereon make financial advice to the commercial banks appropriately.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter considers literature relevant to the subject under study. The section includes; the theoretical literature review, determinants of commercial banks profitability, empirical literature review and summary to the literature.

2.2 Theoretical review

This section gives a brief overview of the foreign exchange theories which include the purchasing power parity (PPP) theory; international fisher effect theory; and interest rate parity theory.

2.2.1 Financial Intermediation Theory

According to Gurley and Shaw(1960)financial intermediation theory is based on the theory of informational asymmetry and the agency theory. A banks core activity is to act as a financial intermediary. It pays interest to depositors, while it receives income from the borrowers. The interest income received from borrowers is higher than that paid to depositors, since the bank has to be remunerated for services rendered but also for the risk it takes in order to lend money to third parties. The fact that banks have usually large numbers of customers means that they have potential buyers of other bank and or non –bank related

services like insurance ,bank assurance ,stock brokerage ,factoring ,asset management and other services.

Due to different needs and conditions, several types of banking institutions have evolved such as: Commercial banks which offer core banking activities, which are financial intermediation and offering of liquidity. However some banks offer nearly any service on the financial spectrum; they can be categorized as corporate or retail depending on clientele. Finally, Merchant banks which originally charged a fee to guarantee clients bills of exchange. This way they provided their clients with liquidity in time. These banks have evolved and are considered as investment banks. If a banking group is big enough in order to be able to render a wider spectrum of financial services it can be considered to be a financial conglomerate, these institutions benefit from economies of scale and scope as well as high number of customers which they can sell a lot of different services (Karlos, 2009).

2.2.2 Shift ability Theory

This theory posits that a bank's liquidity is maintained if it holds assets that could be shifted or sold to other lenders or investors for cash. This point of view contends that a bank's liquidity could be enhanced if it always has assets to sell and provided the Central Bank and the discount Market stands ready to purchase the asset offered for discount. Thus this theory recognizes and contends that shift ability, marketability or transferability of a bank's assets is a basis for ensuring liquidity. This theory further contends that highly marketable security held by a bank is an excellent source of liquidity. Dodds (1982) contends that to ensure convertibility without delay and appreciable loss, such assets must meet three requisites.

Liability Management Theory Liquidity management theory according to Dodds (1982) consists of the activities involved in obtaining funds from depositors and other creditors and determining the appropriate mix of funds for a particular bank.

Liquidity theory has been subjected to critical review by various authors. The general consensus is that during the period of distress, a bank may find it difficult to obtain the desired liquidity since the confidence of the market may have seriously affected and credit worthiness would invariably be lacking. However, for a healthy bank, the liabilities constitute an important source of liquidity.

2.2.3 Commercial Loan Theory

This theory has been subjected to various criticisms by Dodds (1982) and Nwankwo (1992). From the various points of view, the major limitation is that the theory is inconsistent with the demands of economic development especially for developing countries since it excludes long term loans which are the engine of growth. The theory also emphasizes the maturity structure of bank assets and not necessarily the marketability or the shiftability of the assets.

Also, the theory assumes that repayment from the self-liquidating assets of the bank would be sufficient to provide for liquidity. This ignores the fact that seasonal deposit withdrawals and meeting credit request could affect the liquidity position adversely. Moreover, the theory fails to reflect in the normal stability of demand deposits in the liquidity consideration.

This obvious view may eventually impact on the liquidity position of the bank. Also the theory assumes that repayment from the self-liquidating assets of a bank would be sufficient to provide for liquidity. This ignores the fact that seasonal deposit withdrawals and meeting credit request could affect the liquidity position adversely.

2.3 Determinants of Commercial Banks Profitability

Determinants of banks profitability are normally consisting of factors that are within the control of commercial banks. They are the factors which affect the revenue and the cost of the banks. Some studies classified them into two categories namely the financial statement variables and non-financial variables. The financial statement variables include factors that are directly related to the bank's balance sheet and income statement. Whiles, the non-financial statement variables include factors like the number of branches of a particular bank, location and size of the bank (Haron and Sudin 2004).

2.3.1 Income

Rasiah (2010) presented that banks generate income mostly on their assets and the assets could be termed as income and non-income generating. With regards to commercial banks income Rasiah(2010) classified it into two, namely interest and non-interest income. The interest income consist of rates charge on loans, overdraft and trade finance which the banks offers to customers. Whereas, the non-interest income is consisting of fees, commissions, brokerage charges and returns on investments in subsidiaries and securities. According to Vong et al (2009), the major source of banks revenue is interest income. It contributes about

80% of commercial banks earnings. The other source of banks revenue includes dividends and gains from dealing in the securities market. There could be also some minor sources of income for instance earnings from trust activities and service charges on deposit accounts; Vong et al (2009).

2.3.2 Loan quality

As it has been mentioned above, one of the major roles of banks is to offer loans to borrowers and loans serve as one of the ultimate source of earnings for commercial banks. In other words loans represent one of the highest yielding assets on banks' balances sheet. It is obvious that the more banks offer loans the more it does generate revenue and more profit; Abreu and Mendes (2000). But then banks have to be courteous in offering more loans because as they offer more loans to customers they expose themselves to liquidity and default risks which impacts negatively on banks' profits and survival; Rasiah (2010). Example is the recent financial crisis which started in the United States of America in 2007 and 2008. It is well known that most banks engaged in the offering of more loans including non-prime loans during this period. And when the housing prices fell most banks suffered large number of defaults on non-prime loans which in turn resulted in lost of profits and the collapsed of some banks; Gaurav& Kelly (2011)

On the other the investigation of Husni (2011) reveals that interest margin on loans provided by the banks is a significant driver of profitability and poses a positive relationship with profitability. This is in line with a citation made by Vong et al (2009) which exhibits a positive relationship between the loan ratio and profitability. To measure the quality of loans

on the banks' balance sheet they suggested the use of non-performing loans as an indicator of the loans quality.

2.3.3 Deposits

Banks are said to be heavily dependent on the funds mainly provided by the public as deposits to finance the loans being offered to the customers. There is a general notion that deposits are the cheapest sources of funds for banks and so to this extent deposits have positive impact on banks profitability if the demand for bank loans is very high. That is, the more deposits commercial bank is able accumulate the greater is its capacity to offer more loans and make profits; Devinaga Rasiah (2010). However, one should be aware that if banks loans are not high in demand, having more deposits could decrease earnings and may result in low profit for the banks. This is because deposits like Fixed, Time or Term deposits attract high interest from the banks to the depositors, Devinaga Rasiah (2010).

Investigation done by Husni (2011) on the determinants commercial banks performance disclosed that there is significant positive relationship between ROA and total liability to total assets. To capture deposits in the model he presented the effect of deposits on profitability as deposits to total assets ratio.

2.3.4 Interest rate

Devinaga and Rasiah (2010) advocated that interest rate have been captured in most studies as profitability determinant of commercial banks because net interest income which results from the deference between interest income and interest expenses has enormous impact on banks profitability. He stated that most research papers on banks' profit determinants present

the interest rate as external variable because changes in interest rates is mostly cause by government economic policies and supply and demand market conditions.

Moreover, He mentioned that the impact of interest rate changes on the commercial banks profitability depend on the extent and speed at which the change have on short and long term period of banks portfolio. And also the speed and flexibility with which the bank can amend its revenue sources and cost of funds to match up to the change. In addition, it is also about the proportionality of the bank's assets and liabilities that are long period rather than short period.

2.3.5 Inflation rate

Revell (1979) indicated that inflation is one of the factors which may cause variations in commercial banks profitability. Devinaga and Rasiah (2010) in his study asserted that central banks in their capacity to control inflation increase the cost of borrowing and reduce the credit creating capacity thus the funds being given to the commercial banks as loans. As result of this the cost of borrowing becomes higher and the banks becomes more stringent in their lending policies which will subsequently lead to lower demand for funds and a fall in the volume of spending. Obviously the advent of such situation may adversely affect the profitability of the commercial banks because banks earn their revenue mostly from the loans they give to the customer so if the demand of loans falls as a result of the higher cost of borrowing then definitely earnings as well will fall hence the profit.

Devinaga and Rasiah (2010) further stated that inflation impact negatively on commercial banks profitability by decreasing the real value of bank's assets as compared to their liabilities. This is because commercial banks nominal assets might be larger than their nominal liability due to their nature of being net monetary creditors and because of this in times of high inflation the value of the nominal assets would decrease more relative to the increase in the value of nominal liability. Some empirical evidence seems to support this notion that inflation impact negatively on the profitability of commercial banks.

2.4 Empirical Studies

Among the essential functions performed by banks the banking theory identified asset transformation and liquidity creation. Banks create liquidity and transform assets by investing into illiquid loans which are financed with liquid deposits. According to Bourke (1989) carried out a study to establish the relationship between liquid assets and bank profitability for 90 banks in Europe, North America and Australia from 1972 to 1981, the study used econometric framework presented in an equation. The dependent variable, profitability, was regressed against a non-linear expression of relative liquid asset holdings, as well as a set of control variables. Liquid assets were generally included as a control variable in this study with very limited discussion around the estimated parameter. From the study a company with low liquidity and high profitability has to increase its borrowing leading to an increase of the financial costs.

Majluf (1984) argue that because of information asymmetry-induced financing constraints, firms should stock up on liquid assets to finance future investment opportunities with internal

funds Since there are no offsetting costs to liquid assets in their model, the optimal amount of liquidity is a corner solution. In contrast, Jensen (1986) argues that firms should be forced to pay out funds in excess of the amount necessary to finance all positive NPV investments to minimize the agency cost of free cash flow. In the absence of a benefit from liquid assets, Jensen's analysis implies that the firm should carry no liquid assets.

Berger (1995) analyzed the statistical relationships between bank earnings and capital for 50 U.S. banks over the period of 1983-1989 using multiple regression analysis and found that, contrary to what one might expect in situations of perfect capital markets with symmetric information there is a positive relationship between capital and return on equity. This result, according to the author, is consistent with the “expected bankruptcy cost hypothesis.” More specifically, Berger’s results suggest that banks with higher levels of capital see their funding costs decrease to such an extent that it more than offsets the cost of issuing additional capital. While Berger applies the concept of the “expected bankruptcy cost hypothesis” in the realm of capital, it is also conceptually applicable to the impact of liquid assets on profitability, whereby banks holding more liquid assets benefit from a superior perception in funding markets, reducing their financing costs and increasing profitability.

Bordeleau, Crawford and Graham (2009) reviewed the impact of liquidity on bank profitability for 55 US banks and 10 Canadian banks between the period of 1997 and 2009. The study employed quantitative measures to assess the impact of liquidity on bank profitability. Results from the study suggested that a nonlinear relationship exists, whereby profitability is improved for banks that hold some liquid assets, however, there is a point

beyond which holding further liquid assets diminishes a banks' profitability, all else equal. Conceptually, this result is consistent with the idea that funding markets reward a bank, to some extent, for holding liquid assets, thereby reducing its liquidity risk. However, this benefit can eventually be outweighed by the opportunity cost of holding such comparatively low-yielding liquid assets on the balance sheet.

Owolabi, Obiakor and Okwu (2011) conducted a study that investigated the relationship between liquidity and profitability in 15 selected quoted companies in Nigeria. The central objective was to examine the nature and extent of the relationship between liquidity and profitability in profit-driven quoted companies and also to determine whether any cause and effect relationship existed between the two performance measures. Liquidity measure considered was current assets- liabilities ratio while profitability measure was operating profit-turnover ratio. Investigative and quantitative analysis methods were used for the study. Analysis was based on data extracted from annual reports and accounts of the companies for the relevant period. Correlation and regression analysis respectively were employed to examine the nature and extent of the relationship between the variables and determine whether any cause and effect relationship between them.

Loo (2007) conducted a survey of liquidity management approaches and their effect of profitability of commercial banks in Kenya. The survey was conducted on all commercial banks operating in Kenya between the periods 1997 to 2004 and used questionnaires to top finance management staff to identify liquidity management approaches. The study found that profitability was one of the factors that affected a firm's liquidity management policy.

From the study there was a positive correlation between liquidity and profit levels in the banks.

Mureithi (2003) carried out an empirical investigation into the determinants of corporate cash holding for the Kenyan quoted companies. The study involved 29 companies quoted at the Nairobi Securities exchange (NSE) over a period of 10 years. The study used descriptive and quantitative statistics; he observed that one of the factors affecting corporate cash holding is the profitability of the entity. He observed that profitability convey to the market credit worthiness and growth prospects of the firm. From the study there was positive relationship between profitability and liquidity.

Njihia (2005), in a study to identify determinants of commercial banks profitability in Kenya identified liquidity as one of the factors affecting profitability. The study involved 35 commercial banks operating in Kenya over a period of 5 years. The study employed descriptive statistics and multiple regression analysis to estimate the determinants of commercial banks profitability. The study concluded that in one of the years under study liquid assets significantly determined the profit of the commercial banks especially in the period after political instability after the elections. The ratio of deposits held, loans and advances held by the commercial banks influenced the profitability.

According to Maaka (2013) liquidity risk is considered as one of the serious concern and challenge for the modern era banks. A bank having good asset quality, strong earnings and sufficient capital may fail if it is not maintaining adequate liquidity. Towards this end, the

research sought to establish the relationship between liquidity risk and financial performance of commercial banks in Kenya. The study adopted correlation research design where data was retrieved from the balance sheets, income statements and notes of 33 Kenyan banks during 2008-2012. Multiple regressions were applied to assess the impact of liquidity risk on banks' profitability. The findings of the study were that profitability of the commercial bank in Kenya is negatively affected due to increase in the liquidity gap and leverage.

2.5 Summary of Literature Review

The research will examine the effect of liquidity risk on the profitability of commercial banks in Kenya. Banks in Kenya are required to maintain a certain level of liquidity as set by the CBK prudential guidelines. These guidelines are meant to ensure that the entire financial system is stable. From review of literature there is a positive relationship with varying extent between liquidity indicators and profitability indicators on the short term to long term. Review indicated that there was a trade-off between profitability and liquidity in the financial sector but the two variables are positively correlated and also reinforced each other. There was also observed varying results depending on the industry in which the research was conducted, holding of liquid assets in the financial sector was beneficial up to a certain extent beyond which an increase in holding liquid assets can eventually be outweighed by the opportunity cost of holding such comparatively low-yielding liquid assets on the balance sheet.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the research design and methodology of the study; it highlights a full description of the research design, the research variables and provides a broad view of the description and selection of the sample and population. The research instruments, data collection techniques and data analysis procedure have also been pointed out.

3.2 Research Design

A research design is the arrangement of conditions for data collection and analysis of data in a manner that aim to combine relevance to research purpose with economy in research procedure and decisions regarding a research study.

A research design is used to structure the research to show how all major parts of the research project work together and also tries to address the central research questions. Research design may also be viewed as the framework that indicates the type of information that is needed for the research, the source of such information and method of its collection. The descriptive research design will be used in the study.

3.3 Population

A population is defined as all elements (individuals, objects and events) that meet the sample criteria for inclusion in a study. The target population in statistics is the specific population about which information is desired. According to Ngechu (2004), a population is a well defined set of people, services, elements, and events, group of things or households that are being investigated. The target population for the proposed study is 43 commercial banks registered and operating in Kenya. The study will carry out a census survey of all the 43 commercial banks. A schedule of these commercial banks Appendix I.

3.4 Data Collection

The data used in this study was quantitative in nature. The secondary data for five years (2010-2014) was obtained from annual publications by central bank as well as financial statements of commercial banks. This includes statement of financial position and directors reports. Secondary data from CBK was used to supplement data issued by Kenya National Bureau of Statistics (KNBS).

3.5 Data Analysis

The researcher used quantitative techniques in analyzing the data. After receiving questionnaires from the respondents, the responses were edited, classified, coded and tabulated to facilitate quantitative analysis using Statistical Package for Social Science (SPSS version 21). Tables and charts were used for presentation of the analysis output. The collected data was examined and checked for completeness and comprehensibility. The data was then summarized, coded and tabulated.

3.5.1 Analytical Model

Data will be analyzed using Statistical Package for Social Sciences (SPSS Version 21.0) program. Being that the study was descriptive in nature, both quantitative analysis and inferential analysis was used as data analysis technique. The data collected was run through a regression model so as to clearly bring out the effects of Liquidity risk on profitability of commercial banks in Kenya. The results obtained from the models will be presented in tables to aid in the analysis and ease with which the inferential statistics were drawn

The relationship equation was presented in the linear equation below.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Y= Net Interest Income ratio (Net Interest Income divided by Total Income)

β_0 - Constant/Y intercept

X1 –Current ratio (current assets/ Current liabilities) to measure funding risk.

X2 – Liquidity ratio (Net liquid assets divided by net deposits) to measure CBK liquidity risk

X3–Log of Deposits as a control variable to capture the differences in banks sizes.

X4 – Interest rate, as a control variable.

ϵ - Error term

3.5.2 Test of Significance

T-tests can be used to determine whether there is a significant difference between two sets of means. Therefore t-tests using SPSS statistical program would be employed in this study. Conducting the t-tests requires that the normality of the data is not violated. The P-values of

results of the multiple regression analysis shall be used to test for significance of the relationship between variables. The significance level to be used shall be 0.05 (5%) to test for significance where any P-value of less than 0.05 shall indicate a significant relationship.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

The chapter presents the outcome of data analysis and findings in line with the objectives of the Study. The general objective was to assess the effect of liquidity risk on the profitability of commercial banks in Kenya. The data were analyzed using the Statistical Program for Social Sciences (SPSS) version 20, by use of both descriptive and inferential statistics. Descriptive statistics such as minimum, maximum mean and standard deviation were used. The results are based on the analysis of financial results of 43 Commercial banks in Kenya over a period of 5 years (2010-2014). The chapter presents the descriptive results as well as the regression analysis results. A discussion of findings is then made.

4.2 Response rate

Annual financial statements were obtained from 42 commercial banks for the period 2010 – 2014. Financial statements for Charterhouse Bank Ltd were not available as the bank had not been operating over this period. This data available represents 98% which is considered to be reasonably high.

4.2 Descriptive Statistics

Descriptive measures involved mean, maximum, minimum, standard error of estimate, skewness and kurtosis. Mean is a measure of central tendency used to describe the most typical value in a set of values. The standard error is a statistical term that measures the accuracy within a set of values. Skewness is a measure of symmetry, or more precisely, the lack of symmetry. A distribution, or data set, is symmetric if it looks the same to the left and

right of the center point. Kurtosis is a measure of whether the data are peaked or flat relative to a normal distribution (Cooper and Schindler 2008).

The pertinent results are presented in Table 4.1

Table 4.1: Descriptive statistics results of the main variables

	N	Mean	Std. Deviation	Minimum	Maximum
	Valid				
Net Income Ratio	42	0.7151	0.31260	0.1201	1.2843
Current Ratio	42	5.192051	1.27100	-0.5144	0.5017
Liquidity Risk	42	3.334533	0.91501	1.1755	5.7724

Source: Research findings

High values of liquidity have occurred in Kenyan Banks and the liquidity ratio of 3.334533 measures the liquidity of a bank assuming that the bank cannot borrow from other banks in case of liquidity need. Therefore it is a share of liquid assets in deposits of households and nonfinancial companies. Values of mean of the ratio are quite extreme because of a few banks. The volume of liquid assets of the bank is high enough to cover volatile funding if the value of this ratio is higher than 100 %. This was true only for a minority of banks. Consequently, as it can be seen from values of medians, almost all Kenyan banks are sensitive to potential massive deposit withdrawals. The descriptive statistic in table 4.1, shows that the mean Net Income ratio for commercial banks was the listed companies was 0.7151 and the maximum and minimum were .1201 and 1.2843 respectively. The mean for current ratio was 5.192051 with a minimum and maximum of -0.5144 and 0.5017

respectively. The standard deviation for the return on assets was 1.27110. The mean for Liquidity ratio was 3.334533 with a minimum and maximum of 1.1755 and 5.7724 respectively. The standard deviation for liquidity ratio was 0.91501.

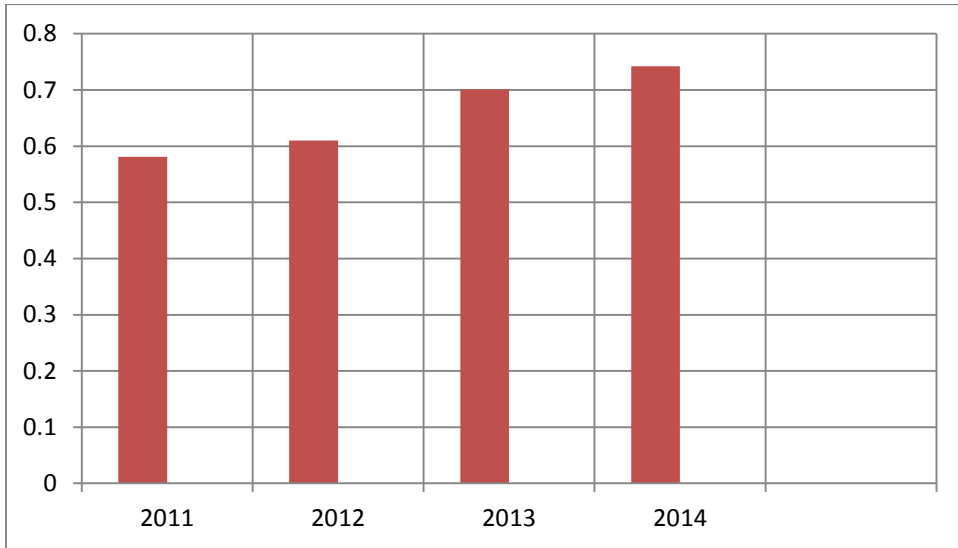
4.2.1 Net Interest Income Ratio

Table 4.2 Net Interest Income Ratio

Year	NII Ratio
2010	0.51263
2011	0.58120
2012	0.61012
2013	0.70135
2014	0.74215

From (table 4.2) it is evident that Net Income ratio for the commercial banks has been on the rise since 2010 to 2014. In 2010 the Net Income ratio was 51.263% while in 2011 the NII ratio was 58.120%, in 2012 it was 61.012%, in 2013 the NII ratio was 70.135% and in 2014 it was 74.215%.

Figure 4.1 Net Interest Income Ratio



According to figure 4.1 above it is evident that NII ratio for commercial banks has been on the rise since 2010 to 2014. In 2010 the Net Income ratio was 51.263% while in 2011 the NII ratio was 58.120%, in 2012 it was 61.012%, in 2013 the NII ratio was 70.135% and in 2014 it was 74.215%.

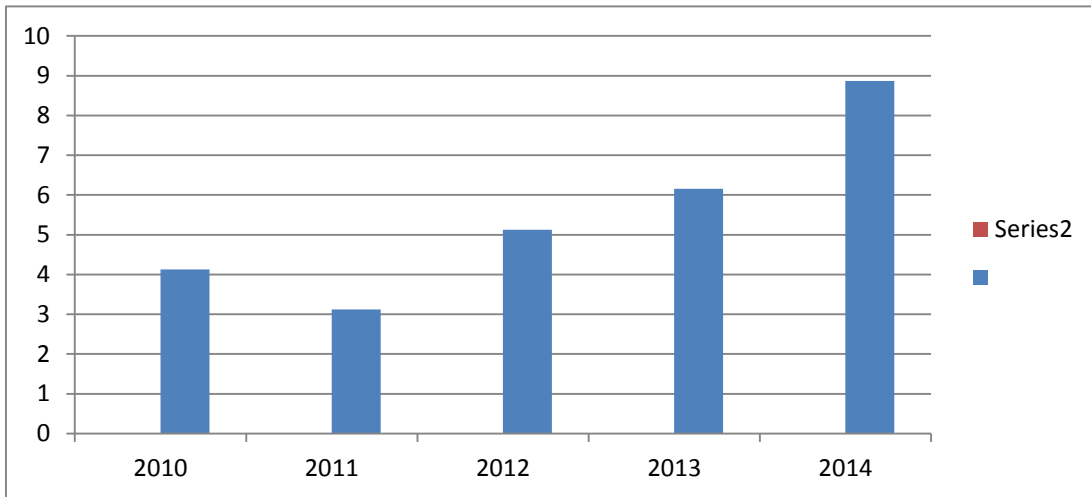
4.2.2 Current Ratio

Table 4.3 Current Ratio

Year	Current Ratio
2010	4.12561
2011	3.12562
2012	5.12546
2013	6.15281
2014	8.86595

The analysis from Table 4.3 shows that the current ratio for commercial banks in Kenya which varies from year to year. In the 2011 the current ratio for the commercial banks was the lowest at 3.12562 while in 2014 the current ratio was the highest at 8.86595.

Figure 4.2 Current Ratio



From the above figure it is evident that the current ratio for commercial banks from 2010 to 2014 varies significantly with the highest being 8.86595 in 2014 and the lowest being 3.12562 in 2011.

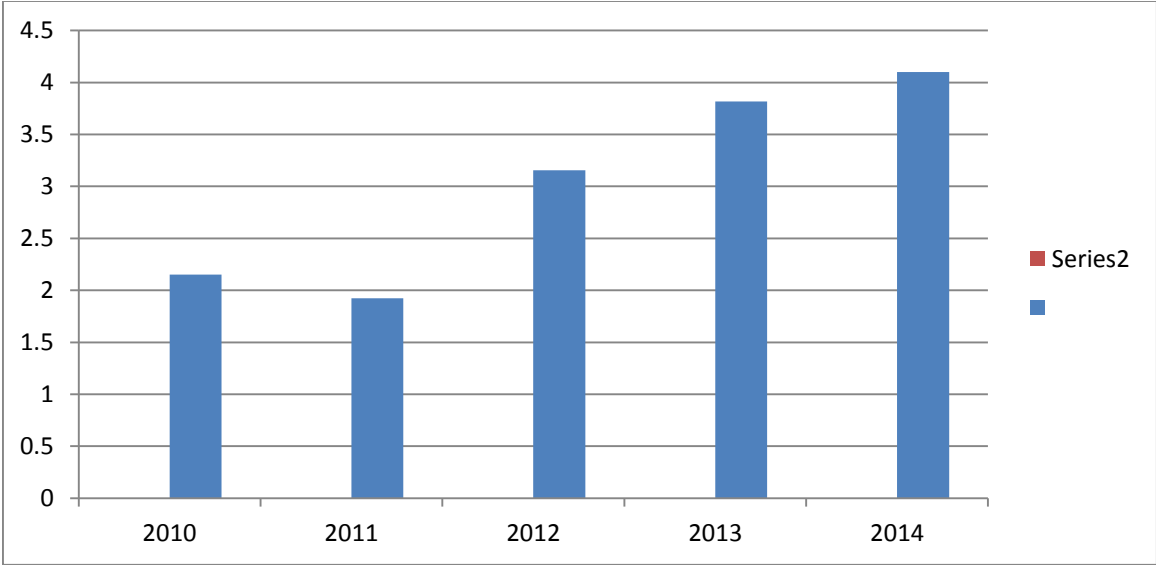
4.2.3 Liquidity Ratio

Table 4.4 Liquidity Ratio

Year	Liquidity Ratio
2010	2.1523
2011	1.9234
2012	3.1564
2013	3.8171
2014	4.1021

From the analysis above it is evident that the Liquidity ratio for commercial banks in Kenya has been varying from 2010 to 2014. In 2010 the liquidity ratio was 2.1523, 2011 it was 1.9234, 2012 it was 3.1564, in 2013 the liquidity ratio was 3.8171 while in 2014 the ratio was 4.1021.

Figure 4.3 Liquidity Ratio



From the above figure it is evident that the current ratio for commercial banks from 2010 to 2014 varies significantly with the highest being 4.1021 in 2014 and the lowest being 1.9234 in 2011.

4.3 Correlation Analysis

Pearson correlation was performed to determine the degree of relationship between the study variables.

Table 4.5 Pearson Product Correlation Coefficients (r)

	NII Ratio	Current Ratio	Liquidity Ratio	Deposits
NII Ratio	1			
Current Ratio	0.6741	1		
Liquidity Ratio	0.5125	0.3814	1	
Deposits	0.4578	0.56142	0.32645	1

*Correlation is significant at the 0.05 level (2-tailed)

Source: Research findings

There was a significant positive relationship between NII ratio and current ratio measured by current assets divided by current liabilities ($r= 0.6741$, $P\text{-value} < 0.05$). The results also indicate a significant positive relationship between NII ratio and Liquidity ratio ($r=0.5125$, $P\text{-value}<.05$). There is a positive relationship between NII ratio and deposits ($r=0.4578$, $P\text{-value}<.05$). The Pearson correlation coefficient above indicates the following relationships; there was a significant positive relationship between NII ratio and current ratio which is a measure of liquidity. This implies that the current ratio, liquidity ratio and the amount of deposits determines the net interest income of commercial banks in Kenya. The Pearson correlation coefficient above showed that there was a positive significant relationship between current ratio and deposits that implies that these commercial banks are able to utilize better the investments they have to sell more.

4.4 Regression Analysis

Regression analysis was used to determine the effect of Interest Income on the performance of commercial banks in Kenya.

Table 4.6 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.621 ^a	.315	.267	.00151

a. Predictors: (Constant), ROA, Sales Volume

The model summary (Table 4.4) indicated that there was a strong positive relationship between the dependent and the independent variables. The value of R Square was 0.315 indicating that 31.5 % of the changes in Net Interest Income (Net Income / Total Income) could be explained by the independent variables for the study (Current ratio and Liquidity ratio) and Deposits as the control variable.

Table 4.7 Analysis of Variance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.367	4	.219	6.583	.015 ^a
	Residual	.430	38	.012		
	Total	.633	42			

a. Predictors: (Constant), Current Ratio, Liquidity Ratio, Deposits

b. Dependent Variable: Net Interest Income

The Analysis of Variance (ANOVA) reveal that composite effect of the three variables (current ratio, liquidity ratio and deposits) on profitability of commercial banks in Kenya as measured by Net Interest income ratio (Net Interest Income/Total Income) is significant as indicated by the P values (0.015) i.e. less than 0.05 and F value (6.583).

Table 4.8 Regression model

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.163	0.235		1.302	0.000
	Current Ratio	0.517	0.173	0.578	4.434	0.021
	Liquidity Ratio	0.653	0.155	0.382	3.292	0.007
	Deposits	0.453	0.0125	0.284	1.256	0.001

a. Dependent Variable: Net Interest Income Ratio

The regression model becomes:

$$\text{NII} = 0.163 + 0.517X_1 + 0.653X_2 + 0.453X_3 + \epsilon t$$

From the regression analysis Constant = 0.163, shows that if all the independent variables are all rated as zero, the Net Interest Income (Net Interest Income/Total Income) of commercial banks in Kenya would rate at 0.025. The level of confidence for the analysis was set at 95%. Therefore, the P- value less than 0.05 imply that the independent variable is significant. The regression results show that NII ratio of commercial banks in Kenya is significantly influenced by current ratio and liquidity ratio (p=0.007) and deposits (P=0.001). However, the regression analysis shows that the current ratio positively impacted profitability (NII) (B=-0.517). Similarly, there was significant positive relationship between liquidity and profitability (P=0.007). The nature of regression coefficients shows the type of relationship between the variables. Negative regression coefficients shows an inverse

relationship exist between independent and dependent variables. The independent variables in the regression model with positive coefficient have a direct relationship with the dependent variable. Therefore, increase in current ratio, liquidity ratio and deposits lead to an increase in profitability (NII) of commercial banks in Kenya.

4.5 Interpretation of the Findings

In summary, this study found that implementation of proper liquidity is an important element in the profitability of commercial banks in Kenya. From the regression equation it was revealed that liquidity through analysis of current ratio and deposits to a constant zero, profitability of commercial banks would stand at 0.163. A unit increase in current ratio would lead to an increase in profitability of commercial banks in Kenya as measured by NII ratio by of 0.517, unit increase in Liquidity ratio would lead to increase in profitability of commercial banks by a factor of 0.653, a unit increase in deposits would lead to increase in profitability of commercial banks by a factor of 0.453. At the 0.05 level of significance and 95% level of confidence, current ratio had a 0.021 level of significance; liquidity ratio had a 0.007 level of significance while deposits had a 0.001 level of significance. Therefore, the most significant factor is liquidity ratio followed by current ratio then by deposits. Overall liquidity ratio had the greatest effect on the profitability of commercial banks as measured by NII.

Liquidity has positive relation with profitability of commercial banks hence the introduction of various liquidity management practices will improve the financial performance of commercial banks. Many different claims by different authors explaining the impact of liquidity on performance have been explored and analyzed vis-à-vis the findings of the study.

Competing explanations to the various arguments have also been shown .It was not, however possible to state the relationship between financial performance of commercial banks and some of the prepositions because of lack of relevant comparative data from other groupings of commercial banks..

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMENDATIONS

5.1 Introduction

The chapter provides the summary of the findings from chapter four, and it also gives the conclusions and recommendations of the study based on the objectives of the study. Theobjectives of this study were to investigate the effects of liquidity ratio on the profitability of commercial banks in Kenya.

5.2 Summary

The study aimed at investigating the effect of liquidity ratio on profitability of commercial banks in Kenya. The study concentrated on the following key liquidity management practices namely current ratio, liquidity ratio and deposits. On the other hand profitability of the commercial banks was measured by net interest income ratio. The Pearson Correlation and regression analysis were used to find out whether there is a relationship between the variables to be measured (i.e. liquidity and profitability of commercial banks in Kenya) and also to find out if the relationship is significant or not. The proxies that were used for liquidity practices were current ratio and liquidity ratio. In summary the study found that the liquidity affected profitability of commercial banks positively. There was a significant relationship between liquidity and profitability of commercial banks in Kenya. Results are also in agreement with Gompers quarterly survey (Gompers and Metrick 2008), that a link existed.

The positive and significant coefficient of the size variable gives support to the economies of scale market-power hypothesis. Larger banks make efficiency gains that can be captured as higher earnings due to the fact that they do not operate in very competitive markets. The negative coefficient of size, significant at the 10 percent level, indicates that this relation might be non-linear due to possible bureaucratic bottlenecks and managerial inefficiencies suffered by banks as they become “too large.” The marginal statistical significance of the regression coefficient, on the other hand, adds further evidence to the hypothesis that, thanks to some degree of market power, banks manage to pass on to depositors and borrowers potential inefficiencies without affecting profits in an important way.

5.3 Conclusion

Liquidity problems if unchecked may adversely affect a given bank's profitability, capital and under extreme circumstances, it may cause the collapse of an otherwise solvent bank. In addition, a bank having liquidity problems may experience difficulties in meeting the demands of depositors, however, this liquidity risk may be mitigated by maintaining sufficient cash reserves, raising deposit base, decreasing the liquidity gap and profitability of commercial banks. Adequate cash reserves will decrease the bank's reliance on the repo market which consequently will reduce the cost associated with over the night borrowing and insurance cost.

It is imperative for the bank's management to be aware of its liquidity position in different product segment. This will help them in enhancing their investment portfolio and providing a competitive edge in the market. It is the utmost priority of a bank's management to pay the required attention to the liquidity problems. These problems should be promptly addressed, and immediate remedial measures should be taken to avoid the consequences of illiquidity. The study has accounted for the capital adequacy in the commercial banks in Kenya as essential in determining their profitability. It has established that there is a direct relationship between capital adequacy and liquidity risk and capital risk as well as the size of the bank. The researcher therefore based on the findings presented in the above section makes conclusions regarding the effects of credit and liquidity risk on capital adequacy on the commercial banks in Kenya. In general, the both credit and liquidity risk in banking sector influence the capital adequacy of commercial banks in Kenya positively.

This has a significant effect on the profitability of the commercial banks which also influences their competitive advantage.

5.4 Recommendations for Policy and Practice

Most African countries have been associated with higher interest rate spreads despite the liberalization of the financial sector. Kenya is not an exception. On average, the interest rate spread for Kenya is closely comparable to the average in other regions, though higher than the average spreads for other regions such as East Asia and Pacific region. Additionally, big banks have comparatively higher spreads than small banks. Whereas the determinants of interest rate spreads are likely to be multifaceted, this paper provides some insights from an empirical viewpoint, based on bank-specific and macroeconomic factors along similar approaches that have been undertaken in the literature.

Using panel data analysis, the empirical results show that bank-specific factors play a significant role in the determination of interest rate spreads in the banking sector in Kenya. These include bank size, credit risk, liquidity risk, return on average assets, net interest income as a ratio of total income and operating costs. The macroeconomic variables, i.e. real GDP growth and inflation rate were not found to be statistically significant in explaining interest rate spreads across banks. The effect of monetary policy as captured by the policy rate was found to be positive but weakly significant, which could arguably imply a weak response by banks to the monetary policy signals.

If the higher spreads are merely interpreted as an indicator of inefficiency, one can easily be tempted to conclude from the positive relationship between bank size and interest rate spreads that big banks are less efficient, which may not necessarily be the case. The results are not surprising given that big banks are associated with market power they control a bigger share of the market both in terms of deposits and loans and advances. They also enjoy good reputation and trust (perceived to be more stable, reliable, well-managed, among other positive attributes) and hence can easily mobilize deposits even at lower rates and attract higher loan demand even at higher rates. Nonetheless, the higher spreads associated with the big banks could be manifestations assessing the determinants of interest rate spread of commercial banks in Kenya

5.5 Limitations of the Study

This study was conducted on commercial banks in Kenya. Banking systems are closely related to the economy of the country they're located in. This has the effect of restricting the relevance of findings to commercial banks in Kenya. Similarities to other economies may exist but findings may differ significantly.

Credit risk and liquidity risk exist in a vast number of businesses however the intensity differs from one industry to the other and also individual companies. Thus the results are therefore limited to commercial banks in Kenya and may not be generalized to other industries or sectors in Kenya.

The study focused on variables such as credit risks, liquidity risk and bank size as the determinants of capital adequacy of banks in Kenya. The results are therefore limited to the bank variables modeled in this study which are not the only factors affecting capital adequacy for commercial banks in Kenya.

The finds of the study show the effects as at December 2013, however with advances in ICT and everyday innovations resulting from competition, the situation could change drastically diminishing the relevance of the study.

5.6 Suggestions for Further Research

Further study in future can be done with emphasis on periods of economic shocks. The focus in this case should be how liquidity risk management impacts financial performance of commercial banks when it is not business as usual. For example when the exchange rate depreciates rapidly, when interest rates increases or decreases at a steep rate or when there is economic recession or boom. Further studies can also be done on the impact of liquidity risk management with focus on product mix of sources of funding and investments. The study in this case would seek to establish how the mix of funding determines the level of liquid assets required and ultimately the impact on performance. For example, a commercial bank with a large component of funding in call accounts Vis a Vis another that has a large component of funding in fixed accounts.

Finally, further studies can be done on the impact of endowment risk on financial performance of commercial banks and how this affect liquidity risk management decisions.

Endowment risk would occur for example where the funding for some liquid assets such as treasury bills that have a fixed come from sources whose cost is flexible therefore a risk that in a rising interest regime a commercial bank would make losses from such liquid assets.

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APPENDIX I: LIST OF COMMERCIAL BANKS

1. African Banking Corporation Ltd.
2. Bank of Africa Kenya Ltd.
3. Bank of Baroda (K) Ltd.
4. Bank of India
5. Barclays Bank of Kenya Ltd.
6. CFC Stanbic Bank Ltd.
7. Chase Bank (K) Ltd.
8. Citibank N.A Kenya

10. Commercial Bank of Africa Ltd.
11. Consolidated Bank of Kenya Ltd.
12. Co-operative Bank of Kenya Ltd.
13. Credit Bank Ltd.
14. Development Bank of Kenya Ltd.
15. Diamond Trust Bank (K) Ltd.
16. Dubai Bank Kenya Ltd.
17. Ecobank Kenya Ltd
18. Equatorial Commercial Bank Ltd.
19. Equity Bank Ltd.
20. Family Bank Ltd
21. Fidelity Commercial Bank Ltd
22. Fina Bank Ltd
23. First community Bank Limited
24. Giro Commercial Bank Ltd.
25. Guardian Bank Ltd
26. Gulf African Bank Limited

27. Habib Bank A.G Zurich
28. Habib Bank Ltd.
29. Imperial Bank Ltd
30. I & M Bank Ltd
31. Jamii Bora Bank Ltd.
32. Kenya Commercial Bank Ltd
33. K-Rep Bank Ltd
34. Middle East Bank (K) Ltd
35. National Bank of Kenya Ltd
36. NIC Bank Ltd
37. Oriental Commercial Bank Ltd
38. Paramount Universal Bank Ltd
39. Prime Bank Ltd
40. Standard Chartered Bank (K) Ltd
41. Trans-National Bank Ltd
42. Victoria Commercial Bank Ltd
43. UBA Kenya Bank Ltd.

43. Housing Finance: Mortgage Finance Company

Source: Central Bank of Kenya Report, 2014.