THE RELATIONSHIP BETWEEN LIQUIDITY RISK AND FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA

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DECLARATION

I declare that this is my original work and has not been presented for a degree in any other university.

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This project has been submitted for examination with my approval as the University Supervisor:

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DEDICATION

I dedicate this project to my family for unfailing encouragement and love; to my dear parents, siblings and son Jelani.

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I wish to thank most sincerely all those whose contributions have made this project a success. To my supervisor Dr. Cyrus Iraya for his assistance and advice all through making this project a success. To my wonderful family for their support both morally and financially. Most of all I thank God for the gift of wisdom and strength to complete this project.

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LIST OF ABBREVIATION

GDP	-	Gross domestic Product
FDIC	-	US Federal Deposit Insurance Corporation
KBA	-	Kenya Bankers Association
NSE	-	Nairobi Securities Exchange
SCP	-	Structure-Conduct-Performance

ABSTRACT

Effective management of a firm's liquidity position is considered one of the important management functions for all businesses, small, medium or large. This is because an ineffective management of a firm's liquidity will result in a firm facing challenges in meeting its short term financial obligations when they fall due. In addition, effective management of liquidity requirements of a firm is perceived to positively affect the firm performance and market value and as a result it forms part of the company's strategic and operational thinking. The study aimed at establishing the relationship between the liquidity risk and financial performance of commercial banks in Kenya. The study adopted descriptive research design. In addition, the study was cross-sectional in which data was gathered just once over the period 2010 to 2014 and as such, a causal study was undertaken in a non-contrived setting with no researcher interference. Multiple regressions was applied to assess the impact of liquidity risk on banks' profitability. The study findings was that there has been an increase in value of cash balance over the five year period studied though there has been an increase in the volume of liquidity gap in commercial banks of Kenya over the five year period studied. It was also found that there was positive correlation coefficient between return on assets and customer deposits, cash balance and size of firm though a weak positive correlation between return on assets and liquidity gap existed. The study concluded that liquidity risk not only affects the performance of a bank but also its reputation and this might result in the loss of confidence among the depositors if funds are not timely provided to them. In addition to this, a poor liquidity position may cause penalties from the regulator and therefore it becomes imperative that banks maintain a sound liquidity position at all times. The study recommends that banks should maintain adequate liquidity levels though in the form of short term marketable securities in order to realize profits for the banks.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Maintaining satisfactory level of liquidity, minimizing risk and optimizing earning capability are the three key domains of finance that deserve serious attention on the part of the finance managers. Consequently, liquidity management can be considered as an important tool to analyze the sustainability and liquidity status of corporate organizations without which the value maximizing objective is hard to be realized (Diamond & Rajan, 2005). Liquidity management is a routine task of finance that concerns with effective management of the two components of working capital, that is, the current assets and the current liabilities. The financial analysis function requires that a firm must look for an adequate level of working capital to meet up the current obligations while sustaining its operating activities because the failure of a firm to meet its obligations due to lack of adequate liquidity is highly risky which can be resulted in bad credit image, loss of creditors confidence, high-cost emergency borrowing, unnecessary legal battles etc and it may even threat its survival as a going concern (Jeanne & Svensson, 2007).

This study will be based on the New Institutional Economics Theory which is of the view that mode adopted by a firm in managing risk is determined by nature of business and industry that firm operates in. This theory recognizes the position that because of the nature of business varies, it will be expected that the uniqueness of the firm operations will pose different kinds of risk and therefore requiring different approach in managing it (Froot, Scharfstein, & Stein, 2003). In the case of banks, they posit that banks can hedge cash flows to avoid a shortfall in funds that may

require a costly visit to the capital markets and at the same time derivatives since they point out those derivatives are positively related to measures of the firms' investment opportunity.

The challenge for banks is to strike the perfect balance between compliance and cost optimization for compliance. Achieving this together is a daunting task. Regulatory compliance requires creating a framework and infrastructure within which the data can be monitored and reported regularly i.e. capital re-alignment, daily liquidity reports, stress reports, management reporting (Goodhart, 2008). He further notes that, cost optimization for liquidity also needs to be achieved. This requires efficient management of liquidity positions for both, the short and long term operations within the regulatory framework. To manage liquidity positions, banks should look at both the long and short-term positions, and exposure to large depositors, among other things. To make the required improvements to the existing framework, banks should undertake a gap analysis to compare where they stand with respect to market best practices. This analysis should include the following – risk definition, management, liquidity positions, measurement and reporting, stress and scenario testing, developing a contingency funding plan, and public disclosure (Brunnermeier & Yogo, 2009)

1.1.1 Liquidity Risk

Liquidity is the ability of a bank to fund increases in assets and meet obligations as they come due, without incurring unacceptable losses (Basel Committee on Banking Supervision, 2008). According to Duttweiler (2009), the inability of banks to raise liquidity can be attributed to a funding liquidity risk that is caused either by the maturity mismatch between inflows and outflows and/or the sudden and unexpected liquidity needs arising from contingency conditions. Thus, liquidity risk is the possibility that over a specific time period, the bank will become

unable to settle obligations with immediacy (Drehmann & Nikolaou, 2009). The maturity transformation of short-term deposits into long-term loans makes banks inherently vulnerable to liquidity risk (Basel Committee on Banking Supervision, 2008). The vulnerability of banks to liquidity risk is determined by the funding risk and the market risk. The funding liquidity risk is caused by the maturity mismatch between inflows and outflows and/or the sudden and unexpected liquidity needs due to contingency conditions. The market liquidity risk refers to the inability to sell assets at or near the fair value, and in the case of a relevant sale in a small market; it can emerge as a price slump (Brunnermeier & Pedersen, 2009).

The behaviour towards liquidity is affected by a firm's characteristics: a bank's liquidity position is affected by its size, status and product type. The size affects the attitude of the bank towards wholesale funding, including the access opportunity and the price of the funds obtained (Nyborg et al. 2002). Bank size matters because of the economy of scope and scale; concerning liquidity, a large bank might have better access to the interbank markets because it has a larger network of regular counterparties or a wider range of. This view is evidence in Kenya, for example where the big five banks such as Kenya Commercial Bank, Equity Bank, Barclays, Standard Chartered and Cooperative bank will have a large deposit base, such that for example at the end of 2014, they had over 70% of all the deposit in Kenyan commercial banks and consequent constitute a major players in the inter-bank trading at any given day. Such banks because of their size will face less liquidity challenges and therefore low liquidity risk. The product type offered to the counterparties, on both the assets and liabilities sides, also affects the liquidity position; banks that take on demand deposits and offer loan commitments need to hold higher liquidity buffers that can be mitigated if an imperfect correlation holds (Kashyap et al. 2002).

1.1.2 Financial Performance

A firm's financial performance is a function of its profitability. The profitability of any firm is determined by both internal as well as external factors. The internal factors of a bank that influence its level of profitability include for example the bank's management decisions and policy objectives such as the level of liquidity, provisioning policy, capital adequacy, expense management and bank size (Duttweiler, 2009). On the other hand the external factors that will influence banks profitability include structural factors such as ownership, market concentration and stock market development and other macroeconomic factors. Green et al. (2010) identified that return on investment, sales and market growth, and profit is important factors that can be used to measure organization performance. Thus, according to these researchers, there are many that can be used to measure the firm's performance such as market shares, financial performance, efficiency and effectiveness of an organization performance, and human resource management.

Four useful measures of firm profitability are the rate of return on firm assets (ROA), the rate of return on firm equity (ROE), operating profit margin and net firm income. The ROA measures the return to all firm assets and is often used as an overall index of profitability, and the higher the value, the more profitable the firm business. The ROE measures the rate of return on the owner's equity employed in the firm business. It is useful to consider the ROE in relation to ROA to determine if the firm is making a profitable return on their borrowed money (Mesquita & Lara, 2003).

1.1.3 Liquidity Risk and Financial Performance

According to the Structure-Conduct-Performance (SCP) approach, the level of concentration in the banking market gives rise to potential market power by banks, which may raise their

profitability. Banks in more concentrated markets are most likely to make, abnormal profits by their ability to lower deposits rates and to charge higher loan rates as a results of collusive (explicit or tacit) or monopolistic reasons, than firms operating in less concentrated markets, irrespective of their efficiency (Tregenna, 2009). Koch (1995) observed that the performance differences between banks indicate differences in management philosophy as well as differences in the market served which affects their liquidity position as well. Athanasoglou *et al.* (2006) concurred and argued that profitability is a function of internal factors that are mainly influenced by a bank's management decisions and policy objectives such as the level of liquidity, provisioning policy, capital adequacy, expense management and bank size, and the external factors related to industrial structural factors such as ownership, market concentration and stock market development and other macroeconomic factors

The profitability level of a firm has been found to improve if it holds some liquid assets, however, there is a point at which holding further liquid assets diminishes a banks' profitability, all else equal (Bernanke, 2008). Such findings are conceptually in line with relevant literatures and are consistent with the idea that the opportunity cost of holding low-return assets eventually outweighs the benefit of any increase in the bank's liquidity. Likewise, there is a similar estimated benefit to holding more liquid assets when economic conditions deteriorate. The ultimate objective of any commercial bank is to maximize the profit. But, preserving liquidity of the commercial bank is equally an important objective too.

The challenge that commercial banks face is that increasing profits at the cost of liquidity can bring serious problems to the bank. Therefore, there must be a trade-off between these two objectives of the firms (Sufian & Chong, 2009). One objective should not be at cost of the other

because both have their importance. If we do not care about profit, we cannot survive for a longer period. On the other hand, if we do not care about liquidity, we may face the problem of insolvency or bankruptcy. For these reasons liquidity management in commercial bank should be given proper consideration and will ultimately affect the profitability of the bank. However, to reach an appropriate decision to make balance between liquidity, profitability and risk, the firm must have controls over the flows of funds while allowing sufficient flexibility to respond to the changes that are taking place in the operating environment.

1.1.4 Commercial Banks in Kenya

There are forty three banks as categorized by Central Bank and members of the clearing house. Thirty-five of these banks, most of which are small to medium sized, are locally owned. The industry is majorly dominated by a few large banks which are foreign-owned, though some are partially locally owned. There are ten banks listed on the Nairobi Securities Exchange. The banks came together under the Kenya Bankers Association (KBA), which serves as the lobby for banks' interests and addresses the issues affecting member institutions (Kenya Bankers Association Annual Report, 2011).

Banks represent a significant and influential sector of business worldwide that plays a crucial role in the global economy. Commercial banks are financial intermediaries that serve as financial resource mobilization points in the global economy (Godana, 2012). They channel funds needed by business and household sectors from surplus spending to deficit spending units in the economy. A well developed efficient banking sector is an important prerequisite for saving and investment decisions needed for rapid economic growth. A well functioning banking sector provides a system by which a country's most profitable and efficient projects are systematically and continuously funded. The role of banks in an economy is paramount because they execute

monetary policy and provide means for facilitating payment for goods and services in the domestic and international trade.

The liquidity level of a bank, which refers to the ability of a bank to fulfill its obligations to depositors, determines the level of bank performance According to Dang (2011) adequate level of liquidity is positively related with bank profitability. The most common financial ratios that reflect the liquidity position of a bank according to the above author are customer deposit to total asset and total loan to customer deposits. Therefore, the vulnerability of banks to liquidity risk is determined by the funding risk and the market risk. The funding liquidity risk is caused by the maturity mismatch between inflows and outflows and/or the sudden and unexpected liquidity needs due to contingency conditions (Duttweiler, 2009). The market liquidity risk refers to the inability to sell assets at or near the fair value, and in the case of a relevant sale in a small market, it can emerge as a price slump and if not well managed is going to lead to a drop in the bank's profitability.

1.2 Research Problem

Effective management of a firm's liquidity position is considered one of the important management functions for all businesses, small, medium or large. This is because when a firm does not manage its liquidity well, it will have challenges in meeting its financial obligations when they fall due because of lack of cash (Jenkinson, 2008). Indeed, Rafuse (2006) observed that liquidity starvation has generally been credited as a major cause, if not the main cause of l business failure in many developed and developing countries. The importance of managing liquidity requirements of a firm has in addition been advocated due to its perceived effect on the firm performance and market value and as a result it forms part of the company's strategic and

operational thinking (Bringham, 2002). Liquidity risk is driven by uncertainty regarding the investment horizon or holding period, the correlation across the cash flow demands of market participants, and short-run constraints on market-making capital. The importance of an effective management of liquidity risk is more pronounced in the banking sector to ensure economic stability and growth.

The Kenyan banking sector plays an important role in the economy by enhancing the flow of funds by lending to the cash starved users of funds as well as providing liquidity to savers on the liability side. Because of the nature of their businesses, banks operations require effective management of their liquidity position because customers demand deposits is unpredictable and there is need of establishing an effective management of its liquidity. Consequently, banks should strive to analyze and assess liquidity scenarios in terms of the risks and actions required, and back them with solid contingency funding plans. They also need to take a critical look at the costs associated with each scenario and analyze the impact of each on the banks' liquidity position.

In the recent past, Liquidity risk has become a serious concern and challenge for the modern era banks. High competition for consumer deposits, a wide array of funding products in wholesale and capital markets with technological advancements have changed the funding and risk management structure (Akhtar, 2012). A bank having good asset quality, strong earnings and sufficient capital may fail if it is not maintaining adequate liquidity.

As a result of the interest that a banks liquidity position has taken, several studies have been undertaken to study the phenomena. Hassan (2009) established that Islamic banks encounter types of risk firstly foreign-exchange risk, second credit risk and third operating risk and that in

assessing the level of risks majority of the respondents used the four core techniques of risk identification – bank risk manager's inspection, audits or physical inspection, financial statement analysis and risk survey. Locally 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. However, from the above studies, it is evident that the realization that that the liquidity risk of a firm may emanate from the very nature of banking business such as macro factors that are exogenous and financing and operating policies that are endogenous has not been explored in much detail. Consequently, 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?

1.3 Research Objective

The objective of this research was to establish the relationship between liquidity risk and the financial performance of banks in Kenya.

1.4 Value of the Study

The understanding of the liquidity risk practices adopted by commercial banks in Kenya as well as how it will influence their performance will help policy makers – governments and other stakeholders – to design targeted policies that will actively stimulate the growth and sustainability of the commercial banks in the country, as well as helping those policy makers to support, encourage, and promote the establishment of appropriate policies to guide the firms.

Regulatory bodies such as Central Bank of Kenya (CBK), Capital Markets Authority (CMA) and the Kenya Revenue Authority can use the study findings to improve on the framework for regulation.

The study findings will benefit management and staff of commercial banks who will gain insight into how their institutions can effectively manage their liquidity risk by coming up with appropriate practices. This study will offer an understanding on the importance of adopting an an appropriate liquidity practices and thus offer competitive advantage to the firms. Several practices on risk management and their effects will be discussed for the benefit of the managers. This is because commercial banks need to adapt to the changing needs of the current business set up and requirement of various customers and providers of services. As a result, commercial banks in the country and other affiliated institution will derive great benefit from the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews literature relating to liquidity risk in the banking system and its influence on performance. The literature review has been organized in the following sections. First section covers the theoretical framework underlying the study, types of liquidity risks facing commercial banks and finally the effect of liquidity risk on bank performance. Finally, the section covers the empirical studies on the research subject area.

2.2.1 New Institutional Economics Theory

According to Williamson (1998), this theory predicts that risk management practices may be determined by institutions or accepted practice within a market or industry. Further, the theory links security with specific assets purchase, which implies that risk management can be important in contracts which bind two sides without allowing diversification, such as large financing contract or close cooperation within a supply chain.

Firms in regulated industries provide top management with few opportunities for discretion in corporate investment and financing decisions. Smith and Watts (1992) showed that regulation is a key determinant of a firm's corporate financial policy. Therefore, if regulated firms face tighter scrutiny and face lower contracting costs, then they are less likely to use derivatives to hedge firm risk. According to Froot et al (2003), if external sources of funds are more costly to a firm than internally generated funds, then the firm could benefit from using derivatives. In particular, firms can hedge cash flows to avoid a shortfall in funds that may require a costly visit to the

capital markets and at the same time derivatives are positively related to measures of the firm's investment opportunity set proxies.

When market participants detect the presence of a large number of urgent sellers, the price of liquidity can rise sharply. Natural buyers of assets hold back from supplying liquidity, accentuating the problem and placing a greater burden on market makers and intermediaries. The financial instability that results can contribute to further risk aversion as investors receive information on the value of their wealth from a market driven by urgent selling pressure and as buyers hold back and wait for calmer markets. In essence, the equilibrating mechanism necessary for the normal functioning of capital markets as a part of the economic allocation process becomes dysfunctional, requiring external intervention to prevent a broadening and deepening of the financial malaise.

2.2.2 Financial Economics Theory

This theory suggests that corporate risk management is apt to increase firm value in the presence of capital market imperfections such as bankruptcy costs, a convex tax schedule, or underinvestment problems. According to Carter et al. (2006) risk management can increase shareholder value by harmonizing financing and investment policies. When raising external capital, firms may under invest. Derivatives can be used to increase shareholder value by coordinating the need for and availability of internal funds. Conflicts of interest between the shareholders and debt holders can also lead to underinvestment.

An underinvestment problem can occur when leverage is high and shareholders only have a small residual claim on a firm’s assets, thus the benefits of safe but profitable investment projects accrue primarily to bondholders and may be rejected (Bessembinder,1991). A credible risk

management can mitigate underinvestment costs by reducing the volatility of firm value. As the underinvestment problem is likely to be more severe for firms with significant growth and investment opportunities, various measures such as the market-to-book ratio, research and development to sales ratio, capital expenditure to sales, net assets from acquisitions to size are used for testing the underinvestment hypothesis.

2.2.3 Balanced Portfolio Theory

The balanced portfolio theory has also added insight in to the study of bank profitability (Nzongang & Atemnkeng, 2006). According to the Portfolio balance model of asset diversification, the optimum holding of each asset in a wealth holder's portfolio is a function of policy decisions determined by a number of factors such as the vector of rates of return on all assets held in the portfolio, a vector of risks associated with the ownership of each financial assets and the size of the portfolio. It implies portfolio diversification and the desired portfolio composition of commercial banks are results of decisions taken by the bank management. Further, the ability to obtain maximum profits depends on the feasible set of assets and liabilities determined by the management and the unit costs incurred by the bank for producing each component of assets (Nzongang & Atemnkeng, 2006).

In the case of a bank, there is need for an efficient asset allocation decision being made by the management using the risk and return information given by the dominant portfolio. The formation of the dominant portfolio depends on the correlation coefficients among all the assets within the asset universe. On the other hand, one of the biggest hurdles in MPT is that the actual optimal portfolio doesn't really exist. Thus, neither the portfolio risk nor the return can be observed and must be estimated with sample observations. Recent literature suggests that the estimation of return is subject to large estimation errors (Roll, 1992). It highlights that a real

trade-off exists between the return on an investment and the risk (variance) of the investment. In the textbook example of portfolio theory, an investor is assumed to have preferences over the expected return on an investment and the variance of that return over time.

From the theories reviewed above, it is evident that the bank liquidity comes out as an important parameter that should be maintained at any given time. The investment opportunities that the bank undertakes should consider the need the liquidity position and the capacity to pay the customer deposit on demand. The risk management practices of the bank also came out as an important aspect that should be considered and factor the required liquidity position of the firm.

2.3 Determinants of Financial Performance of Banks

In accordance with the above theories discussed, many studies have introduced some variables in the profit function of commercial banks to shed light on key factors that make a difference in bank profits. From the review of the literature, there is a consensus that bank profitability is a function of internal and external factors. Koch (1995) point out that the performance differences between banks indicate differences in management philosophy as well as differences in the market served. Athanasoglou *et al.* (2006) concurred and argued that profitability is a function of internal factors that are mainly influenced by a bank's management decisions and policy objectives such as the level of liquidity, provisioning policy, capital adequacy, expense management and bank size, and the external factors related to industrial structural factors such as ownership, market concentration and stock market development and other macroeconomic factors.

2.3.1 Capital Adequacy

Capital adequacy refers to the sufficiency of the amount of equity to absorb any shocks that the bank may experience (Kosmidou, 2009). In most of the countries, the capital structure of banks is highly regulated because capital plays a crucial role in reducing the number of bank failures and losses to depositors when a bank fails as highly leveraged firms are likely to take excessive risk in order to maximize shareholder value at the expense of finance providers (Kamau, 2009). Although there is general agreement that statutory capital requirements are necessary to reduce moral hazard, the debate is on how much capital is enough.

Regulators would like to have higher minimum requirements to reduce cases of bank failures, whilst bankers in contrast argue that it is expensive and difficult to obtain additional equity and higher requirements restrict their competitiveness (Koch, 1995). Beckmann (2007) argue that high capital lead leads to low profits since banks with a high capital ratio are risk-averse, they ignore potential investment opportunities and, as a result, investors demand a lower return on their capital in exchange for lower risk. The quality of assets held by a bank depends on exposure to specific risks, trends in non-performing loans, and the health and profitability of bank borrowers (Baral, 2005). Aburime (2008) asserts that the profitability of a bank depends on its ability to foresee, avoid and monitor risks, possibly to cover losses brought about by risks arisen.

2.3.2 Asset Quality

Poor asset quality and low levels of liquidity are the two major causes of bank failures. Poor asset quality led to many bank failures in Kenya in the early 1980s. During that period 37 banks collapsed following the banking crises of 1986-1989, 1993-1994 and 1998 (Mwega, 2009). According to Waweru and Kalani (2009) many of the financial institutions that collapse in 1986

failed due to non-performing loans (NPLs) and that most of the larger bank-failures, involved extensive insider lending, often to politicians. The CBK measures asset quality by the ratio of net non-performing loans to gross loans. However Koch (1995) argues that a good measure of credit risk or asset quality is the ratio of loan loss reserve to gross loans because it captures the expectation of management with regard to the performance of loans.

2.3.3 Management efficiency

Another important decision that the managers of commercial banks take refers to the liquidity management and specifically to the measurement of their needs related to the process of deposits and loans. The importance of liquidity goes beyond the individual bank as a liquidity shortfall at an individual bank can have systemic repercussions (CBK, 2009). It is argued that when banks hold high liquidity, they do so at the opportunity cost of some investment, which could generate high returns (Kamau, 2009). The trade-offs that generally exist between return and liquidity risk are demonstrated by observing that a shift from short term securities to long term securities or loans raises a bank's return but also increases its liquidity risks and the inverse in is true. Thus a high liquidity ratio indicates a less risky and less profitable bank (Hempel et al. 1994). Thus management is faced with the dilemma of liquidity and profitability. Myers and Rajan (1998) emphasized the adverse effect of increased liquidity for financial Institutions stating that, "although more liquid assets increase the ability to raise cash on short-notice, they also reduce management's ability to commit credibly to an investment strategy that protects investors" which, finally, can result in reduction of the "firm's capacity to raise external finance" in some cases (Uzhegova, 2010).

Poor expenses management is the main contributors to poor profitability (Sufian & Chong 2008). In the literature on bank performance, operational expense efficiency is usually used to assess managerial efficiency in banks. Mathuva (2009) observed that the CIR of local banks is high when compared to other countries and thus there is need for local banks to reduce their operational costs to be competitive globally. Beck and Fuchs (2004) examined the various factors that contribute to high interests spread in Kenyan banks. Overheads were found to be one of the most important components of the high interests rate spreads. An analysis of the overheads showed that they were driven by staff wage costs which were comparatively higher than other banks in the SSA countries

2.3.4 Market Power

The market power theory, posits that the more concentrated the market, the less the degree of competition (Tregenna, 2009). According to Nzongang and Atemnkeng (2006) high degrees of market share concentration are inextricably associated with high levels of profits at the detriment of efficiency and effectiveness of the financial system due to decreased competition. Secondly, since commercial banks are the primary suppliers of funds to business firm, the availability of bank credit at affordable rates is of crucial importance for the level of investments of the firms, and consequently, for the health of the economy. In situation of increased concentration, the possibility of rising costs of credits is reflected by a reduction of the demand for bank loans and the level of business investments. The effect multiplies many folds in as much as bank management capitalizes on the market share concentration factor.

2.3.5 Bank Size

Large banks with market power have typically been viewed as having incentives that minimize their risk-taking behavior and improve the quality of their assets. Keeley (1990) as cited by Northoctt (2004) argues that the rise in bank failures in the United States during the 1980s was due in part to an increase in competition in the banking industry. Flamini *et al.* (2009) noted that if high returns are the consequence of market power, this implies some degree of inefficiency in the provision of financial services. In this case it should prompt policymakers to introduce measures to lower risk, remove bank entry barriers if they exist, as well as other obstacles to competition, and reexamine regulatory costs. But bank profits are also an important source for equity. If bank profits are reinvested, this should lead to safer banks, and, consequently high profits could promote financial stability.

2.3.6 Macro-Economic Factors

The macroeconomic policy stability, Gross Domestic Product, Inflation, Interest Rate and Political instability are also other macroeconomic variables that affect the performances of banks. For instance, the trend of GDP affects the demand for banks asset. During the declining GDP growth the demand for credit falls which in turn negatively affect the profitability of banks. On the contrary, in a growing economy as expressed by positive GDP growth, the demand for credit is high due to the nature of business cycle. During boom the demand for credit is high compared to recession (Athanasoglou et al. 2005). The same authors state in relation to the Greek situation that the relationship between inflation level and banks profitability is remained to be debatable. The direction of the relationship is not clear (Vong & Chan, 2009).

From the above determinants of the bank performance, it came out that there are a multiplicity of factors that influences the performance of a bank performance. There is need therefore of a bank to consider the several determinants and not only depend on one factor. As much as external factors outside the purview of the bank management could influence its performance, there is need to consider also the internal factors that are also important. Such factors as bank size, investment portfolio and management efficiency came out as equally important factors that will need to be managed effectively.

2.4 Empirical Reviews

Azam and Siddiqui (2012) sought to establish Domestic and Foreign Banks' Profitability determinants using data envelopment analysis to calculate radial technical efficiency scores. The study then employed stochastic frontier analysis to attribute variation in the calculated determinants. They concluded that foreign banks are more profitable than all domestic banks regardless of their ownership structure by applying regression analysis. They further suggest tht...it is better for a multinational bank to establish a subsidiary/branch rather than acquiring an "existing player" in the host country. Acquisition of a local bank might be an economical strategy since the local bank will already have established a goodwill which the new foreign bank will ride on.

Chantapong (2005) researched on the determinants of domestic and foreign bank performance in Thailand. They study used the development in unit root tests and co-integration as applied to panel data and dynamic time series, to estimate the relationship concluded that foreign banks are more profitable than the average domestic banks profitability. Favorable macro-economic conditions play a supportive role while higher tax policies play a hostile role for the entry and

presence of foreign Islamic banks. The recent financial crisis does not seem to affect the entry decision significantly. But the profitability of domestic banks has been seriously affected by the recent crisis. Results also indicate that private sector credit availability seems to suffer because of higher tax and reserve rate.

The same finding is supported by a research by Okuda and Rungsomboon (2004) who researched on the Liquidity risk, liquidity creation, and financial fragility: a theory of banking who found that that foreign owned banks in Thailand are found to be efficient compared to their domestic counterparts due to modernized business activities supported by technology, reduced costs associated with fee-based businesses and improved their operational efficiency. The major reason behind these assertions is that foreign banks were believed to be strong & efficient and will be bringing in new expertise that might not be locally available and this know-how has proved invaluable in most of the countries.

Tregenna (2009) using a sample of USA commercial banks and savings institutions from 1995 to 2005 and a linear regression panel model, found robust evidence that concentration increases profitability in USA banks and then concluded than the high profitability of banks in the USA before the 2007/2008 financial crisis was not earned through efficient processes, but through market power and the profits were not reinvested to strengthen the capital base of the financial institutions. Market dominance of banks has been used by majority of the banks to gain economies of scale and also capture lucrative government and international contracts that is determined by the level of capital base.

In the case of Islamic banks, Hassan (2009) reports that, like the conventional banks, they are also subject to a variety of risks due to the unique range of products offered. He also shows that there was a remarkable understanding of risk and risk management among the staff working in the Islamic banks of Brunei Darussalam, which proved their ability to manage risk successfully. The major risks that were faced by these banks were foreign exchange risk, credit risk and operating risk. A regression model was used to develop the results, which showed that RI, and RAA were the most influential variables, and the Islamic banks in Brunei needed to give more attention to those variables to make their RMPs more effective.

Nzongang and Atemnkeng (2000) examined the effects of concentration to the profitability of Cameroonian commercial banks from 1987 to 1999. Unlike Tregenna (2009), who used the concentration ratio of the 3 largest banks in the USA to model market concentration, Nzongang and Atemnkeng (2000) used the Herfindahl-Hirschman index to measure market concentration in Cameroon. The results indicate that market concentration power is of paramount importance in the determination of bank profitability.

Van Greuning and Iqbal (2008) and Iqbal and Mirakhor (2011) argue that a comprehensive framework of risk management is equally applicable to a conventional or Islamic bank. The findings of Hassan (2009) lend further support to this argument. Khan and Bhatti (2008) observed that Islamic banks face another crucial challenge to improving their risk management strategies and corporate governance because of their adherence to Islamic Sharia'a (law). This should have an impact on the risk management of Islamic banks in terms of certain applications, emphasis and inclusion or exclusion. They also used a regression model to establish the relationship.

A study by Kieschnick et al. (2008) using data on a panel of U.S. corporations from 1990 through 2004, established the importance of working capital management to firm value. Their study used stock's excess return to represent the firm value and findings show that on average an additional dollar invested in net operating working capital reduces firm value and this indicates that their study is consistent with industry surveys suggesting that some firms over-invest in net operating working capital.

The behaviour towards liquidity is affected by a firm's characteristics: a bank's liquidity position is affected by its size, status and product type. The size affects the attitude of the bank towards wholesale funding, including the access opportunity (Allen et al. 1989) and the price of the funds obtained (Nyborg et al. 2002). Bank size matters because of the economy of scope and scale; concerning liquidity, a large bank might have better access to the interbank markets because it has a larger network of regular counterparties or a wider range of collateral (Fecht et al. 2008). The product type offered to the counterparties, on both the assets and liabilities sides, is able to affect the liquidity position; banks that take on demand deposits and offer loan commitments need to hold higher liquidity buffers that can be mitigated if an imperfect correlation holds (Kashyap et al. 2002).

Ongore and Kusa (2013) studied the determinants of financial performance of commercial banks in Kenya. One of the bank specific factors considered was liquidity management. The objective of this study was to fill in the gap left by scanty studies on the moderating effect of ownership structure on bank performance. The authors used linear multiple regression model and generalized Least Square on panel data to estimate the parameters

Mwigana (2010) analyzed the effects of financial sector liberalization on financial performance of commercial banks in Kenya for the period 2008- 2012. The financial liberalization index was calculated for the period 1989- 2012. This is because the principal component analysis method that was used in the calculation of the index required data for all the years since the liberalization process started in Kenya so as to calculate the financial liberalization index required for the study period. The study established that financial liberalization policies introduced in Kenya in the late 1980s have had a positive impact on return on equity and return on assets.

Kamau (2009) used a sample of 40 banks in Kenya from1997-2006 and linear regression method to analyze factors of bank inefficiencies. The results showed that an increase in the degree of foreign ownership in Kenya is associated with a reduction of cost inefficiencies, suggesting that the degree of foreign-owned banks influences the performance of the local banking sector.

2.5 Chapter Summary

The bank liquidity management practices has been discussed in detail both in the literature as well as from the empirical studies done on the subject area. It was evident that bank liquidity management is important for an organization's health performance and it is used by a firm's management to create a positive contribution to the goals, objectives and the portfolio of almost all its activities. Banks must integrate market, credit and operational risk into a single stream of capital measurement to have a comprehensive picture of their entire capital resources and this step is considered an imperative component of enterprise risk management system. This step will help banks to establish their overall risk profile, determine how much risk it is taking and the level of diversification it can achieve by entering in different business areas.

A banks liquidity risk not only affects the performance of a bank but also its reputation and a bank may lose the confidence of its depositors if funds are not timely provided to them. Further it emerged that poor liquidity position may cause penalties from the regulator and it therefore became imperative that a bank to keep a sound liquidity arrangement. Liquidity risk has become a serious concern and challenge for the modern era banks characterized by high competition for consumer deposits and capital markets with technological advancements and as a result, banks should be equipped to deal with the changing monetary policy that shapes the overall liquidity trends and the banks' own transactional requirements and repayment of short term borrowing.

The literature also discussed the multiplicity of factors that affect the performance of a bank. These factors include internal factors such as the asset quality, the bank capacity adequacy, management efficiency, market power and the bank size. The external factors that were found to affect the bank performance include the macroeconomic policy stability, Gross Domestic Product, Inflation, Interest Rate and Political instability are also other macroeconomic variables that affect the performances of banks.

2.6 Knowledge Gap

Though several studies have been carried out as far as the liquidity management practices of commercial banks is concerned especially in the developed countries, there has been few studies looking at the liquidity risk and its effect on the performance of the firms. The research in the past have focused on liquidity risk emanating from the liability side of a bank's balance sheet and less attention has been given to the risks arising from the asset side. Liquidity risk may arise due to the breakdown or delays in cash flows from the borrowers or early termination of the projects or may even originate from the very nature of banking; macro factors that are exogenous

and financing and operating policies that are endogenous. A severe liquidity crisis may cause massive drowning in form of bankruptcies and bank failure leading to a drastic financial crisis. This study fills in the gap by looking at liquidity from the deficiency of the asset side of the bank balance sheet as well as other macro factors.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter sets to explain the research design, the population of interest, the basis of sample selection, the type of secondary data used, the sources of data, the techniques of analysis that was used and the data analysis.

3.2 Research Design

This study employed descriptive research design. According to Albright et al. (2011) a correlation research is a procedure in which subjects' score on two variables are simply measured, without manipulation of any variable, to determine whether there is a relationship.

The study was cross-sectional in which data was gathered just once over the period 2010 to 2014 and as such, a causal study was undertaken in a non-contrived setting with no researcher interference. A cross sectional study permitted the researcher to make statistical inference on the broader population and generalize the findings to real life situations and thereby increase the external validity of the study.

3.3 Population of the Study

The population of interest in this study were commercial banks in Kenya that have operated between 2010 and 2014. Currently, there are 42 commercial banks operating in Kenya (Appendix I). The reason as to why this industry was chosen is due to the availability and the reliability of the financial statements in that they are subject to the mandatory audit by

internationally recognized audit firms as well as Central Bank of Kenya as regulator. In addition, all the banks have their headquarters in Nairobi and its environs and this made it convenient in terms of time and accessibility to the researcher. Since the number of the respondents is limited, then the study was a census survey.

3.4 Data Collection

Data was collected from annual reports submitted to the CBK and Capital Markets Authority. All the banks in the banking sector that operated continually between 2010 and 2014 were included to ensure that the sampling frame is current and complete. From the financial statements, the researcher collected panel data; a combination of time series and cross sectional data.

These information included size of customer deposits, non-performing loans level, and cash level and from the notes to the accounts and the liquidity gap in the bank's balance sheet. In getting the same information, only firms that had continuously operated over the period 2010 to 2014 were considered in the study.

3.5 Data Analysis

Multiple regression analysis was applied to the data to examine the effect of the various aspects of liquidity risk on the performance of the commercial banks in Kenya. The regression model was run from the financial reports of the banks. The statement of financial position as well as the statement of financial performance and their notes were studied to get the data for the variables mentioned in the model

Profitability = f (Deposits, Cash, Liquidity gap, Non performing Loans, α)

The model specifically took the form;

$Y = \beta o + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \varepsilon$

Where;

Y - ROA = Net profit/Total Assets

X_1 - Customer deposits to be gotten from the liability section of the balance sheet of the respective year

X_2 - The total cash balance and equivalent marketing securities in the asset section of the balance sheet

X3 - Liquidity gap that will be obtained from the notes to the accounts that will represent the maturity of assets and liabilities.

X_4 - Non-performing loans which will be taken from the statement of financial performance of the respective banks and the notes to the financial statements

X_5 - Firm Size = Log of Total Assets

X_6 - Leverage = Total debt/ Total Assets

The F- test was used to determine the significance of the regression while the coefficient of determination, $R^{2,}$ was used to determine how much variation in Y is explained by X. This was done at 95% confidence level and correlation analysis was carried out to find the direction of the relationship between PBT and the independent variables. The Statistical Package for Social Sciences (SPSS) will be used to analyze the data.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter presents analysis and findings of the research. The objective of this study was to establish the relationship between liquidity risk and financial performance of commercial banks in Kenya between 2010 -2014.

4.2 Summary Statistics

The study examined the amount of customer deposits within a period of five years with the objective of finding out if the customer deposits by commercial banks in Kenya impacted on financial performance.

Table 4.1: Customer deposits

Year	Amount (Ksh)
2010	28,858,373,585.00
2011	35,421,513,220.00
2012	46,773,424,042.00
2013	57,851,438,142.00
2014	66,670,096,080.00

The study established that the year 2014 recorded the highest value of customer deposits 66,670,096,080 while the year 2010 recorded the lowest value of customer deposits of 28,858,373,585. This implied that there has been an increase in value of customer deposits over the five year period.

The study also sought to investigate the trends in the cash balance of commercial banks in Kenya from the year 2010 to 2014

Table 4.2: Cash Balance

Year	Amount
2010	1,924,153,353.00
2011	2,877,246,616.00
2012	3,322,118,079.00
2013	4,280,042,370.00
2014	4,370,796,015.00

Based on the findings the year 2014 recorded the highest value of cash balance 4,370,796,015 while the year 2010 recorded the lowest value of cash balance of 1,924,153,353. This implied that there has been an increase in value of cash balance too over the five year period studied.

The study sought to investigate the trends in the liquidity gap of commercial banks in Kenya from the year 2010 to 2014

Table 4.3: Liquidity gap

Year	Amount
2010	223,409,284.00
2011	273,497,451.00
2012	380,725,539.00
2013	399,244,717.00
2014	419,083,948.00

Based on the findings the year 2014 recorded the highest value of cash balance 419,083,948.00 while the year 2010 recorded the lowest value of liquidity level of 223,409,284. This implied that there has been an increase in volume of liquidity gap too over the five year period studied.

The study sought to investigate the trends in the non-performing loans of commercial banks in Kenya from the year 2010 to 2014

Table 4.4:Non-performing loans

Year	Amount
2010	177,236,699.00
2011	122,125,774.00
2012	334,872,130.00
2013	184,846,281.00
2014	21,768,727.00

Based on the findings the year 2012 recorded the highest value of non-performing loans 334,872,130 while the year 2014 recorded the lowest value of non-performing loans of 21,768,727. This implied that there has been an irregular trends in the volume of non-performing loans over the five year period studied.

The researcher sought to investigate trends in Bank size (logarithm of total assets) in commercial banks of Kenya from 2010 to 2014. The results are displayed on table below.

Table 4.5: Size of Firm

Year	Median (000,000)	Minimum (000,000)	Maximum (000,000)	Mean (000,000)	Std deviation
2010	9.31	5.32	10.11	9.88	0.13
2011	10.11	6.44	11.91	10.90	0.54
2012	12.31	9.25	13.15	12.99	1.26
2013	12.41	8.47	11.54	12.33	1.13
2014	13.11	10.43	13.76	13.23	1.21

From the findings, it can be noted that the year 2014 recorded the highest value for the Size of financial Institutions as shown by a mean of value of 13.23 while the year 2010 recorded the lowest value for the Size of bank as shown by 9.88. In addition, values for stardard deviation depicts variability in Size of financial Institutions during the five-year period with the highest

deviation of 1.26 in the year 2012 and the lowest 0.13 in the year 2013. The findings revealed that there have been a significant increase in Size of financial Institutions during the five-year period.

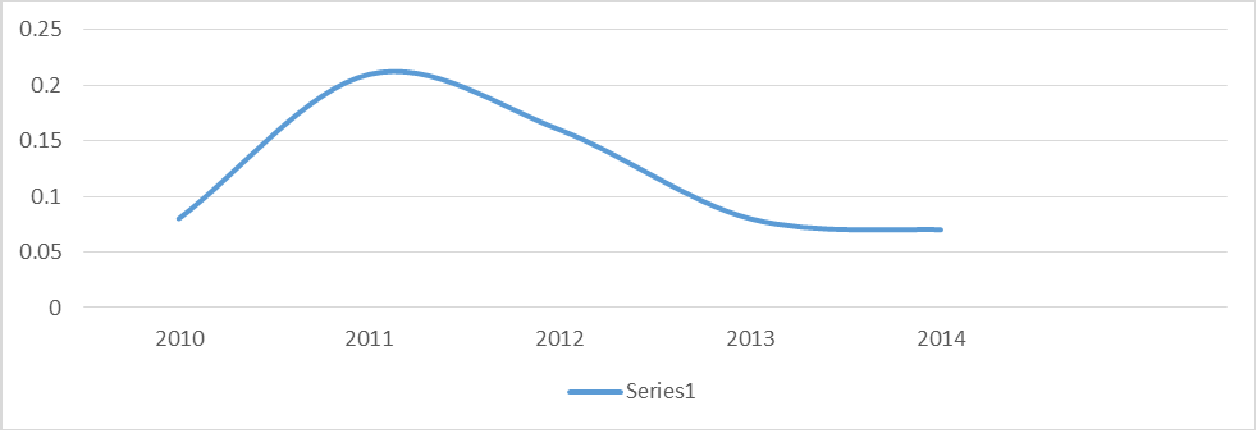

Figure 4.1: Leverage Ratio

Based on the findings the year 2011 recorded the highest ratio of leverage while the year 2014 recorded the lowest value of leverage. This implied that there has been an irregular trends in the leverage ratios over the five year period studied due to economic crisis which was high in 2011. The researcher sought to investigate trends in **financial performance** of commercial banks of Kenya from 2010 to 2014. The results are displayed on table below.

Table 4. 6: Descriptive Statistics on Financial performance

Year	Median	Minimum	Maximum	Mean	Std deviation
2010	45.31	42.30	49.13	46.21	1.12
2011	55.01	44.40	62.25	54.33	1.06
2012	56.23	51.59	63.31	58.07	0.86
2013	78.31	60.34	85.16	77.44	0.61
2014	82.12	78.22	94.15	84.21	0.35

From the findings, it can be noted that the year 2010 recorded the lowest value in Financial performance, at as shown by a mean value of 46.21 while the year 2014 recorded the highest value Financial performance at 84.21. In addition, values for stardard deviation depicts variability in investment in Financial performance during the five –year period. The findings revealed that there have been a significant increase in Financial performance during the five-year period.

4.3 Correlation

The Karl Pearson's product-moment correlation was used to analyse the association between the independent and the dependent variables. The Pearson product-moment correlation coefficient (or Pearson correlation coefficient for short) is a measure of the strength of a linear association between two variables and is denoted by r. The Pearson correlation coefficient, r, can take a range of values from +1 to -1.

A value of 0 indicates that there is no association between the two variables. A value greater than 0 indicates a positive association, that is, as the value of one variable increases so does the value of the other variable. A value less than 0 indicates a negative association, that is, as the value of one variable increases the value of the other variable decreases. Pearson's Correlation Coefficient was carried out and the results obtained are presented in table below

Table 4.7: correlation

		ROA	Customer deposits	Cash balance	Liquidity gap	Non-performing loans	Size of Firm	Leverage
ROA	Pearson Correlation	1	.659	. 609**	. 048**	-.139**	.767**	-.0438
Customer deposits	Pearson Correlation	.659	1	.016	.158	.103	.293*	.016
Cash balance	Pearson Correlation	.609**	.016	1	.077	.021	.168	.731**
Liquidity gap	Pearson Correlation	. 048**	.158	.077	1	.820**	.583**	.078
Non-performing loans	Pearson Correlation	-.139**	.103	.021	.820**	1	-.580**	-.022
Size of Firm	Pearson Correlation	.767**	.293*	.168	-.583**	-.580**	1	.170
leverage	Pearson Correlation	-.0438	.016	.731**	.078	.022	.170	1

Source: Research findings (2015)

On the correlation of the study variable, the researcher conducted a Pearson moment correlation. from the finding in the table above, the study found that there was positive correlation coefficient between return on assets and customer deposits, as shown by correlation factor of 0.659, this relationship was found to be statistically significant as the significant value was 0.001 which is less than 0.05, the study found strong positive correlation between return on assets and cash balance as shown by correlation coefficient of 0.609, the significant value was 0.000 which is less than 0.05, the study found a weak positive correlation between return on assets and liquidity gap as shown by correlation coefficient of 0.048, the study found that there was negative correlation coefficient between return on assets and non-performing loans, as shown by correlation factor of -0.139, this relationship was found to be statistically significant as the significant value was 0.000 which is less than 0.05 , the study found positive correlation between return on assets and size of firm as shown by correlation coefficient of 0.767, the significant value was 0.003 which is less than 0.05, the study found a negative correlation between return on assets and financial leverage as shown by correlation coefficient of -.0438.

The findings concur with franks and Curswoth, (2003) who found out that strong positive correlation between return on assets and size of firm. The findings further agree with ayodele (2011) who found out that strong positive correlation between customer deposits and return on assets.

4.4 Estimated or Empirical Model

In this study, a multiple regression analysis was conducted to test the influence among predictor variables. The research used statistical package for social sciences (SPSS V 21.0) to code, enter

and compute the measurements of the multiple regressions. The model summary are presented in the table below

Table 4.8: **Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.877[a]	.769	.727	.0193

Adjusted R squared is coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable. From the findings in the above table the value of adjusted R squared was 0.769 indication that there was variation of 76.9 percent on financial performance of commercial banks due to changes in customer deposits, cash balance liquidity gap, non-performing loans, size of firm, and leverage at 95 percent confidence interval. This shows that 76.9 percent changes in financial performance of commercial banks could be accounted to changes in customer deposits, cash balance liquidity gap, non-performing loans, size of firm, and leverage. R is the correlation coefficient which shows the relationship between the study variables, from the findings shown in the table above there was a strong positive relationship between the study variables as shown by 0. 877.

The study further tested the significance of the model by use of ANOVA technique. The findings are tabulated in table below.

Table 4.9: Summary of One-Way ANOVA results

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	71.9	4	17.975	9.679	.000[b]
1	Residual	72.288	39	1.8535		
	Total	144.188	43			

Critical value = 2.56

From the ANOVA statics, the study established the regression model had a significance level of .000 which is an indication that the data was ideal for making a conclusion on the population parameters as the value of significance (p-value) was less than 5%. The calculated value was greater than the critical value (9.679>2.56) an indication customer deposits, cash balance liquidity gap, non-performing loans, size of firm, and leverage all have a significant effects on return on assets of commercial banks in Kenya. The significance value was less than 0.05 indicating that the model was significant.

In addition, the study used the coefficient table to determine the study model. The findings are presented in the table below.

Table 4.10: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.201	.094	.239	2.138	.000
Customer deposits	.425	.136	.401	3.125	.011
Cash balance	.367	.126	.346	2.913	.016
Liquidity gap	.047	.122	.010	0.385	.014
Non-performing loans	-.036	.104	-.053	-3.471	.018
Size of the Bank	.697	.125	.579	5.576	.008
leverage	-.043	.121	-.0302	-3.565	.0350

Source: Research findings (2015)

As per the SPSS generated output as presented in table above, the equation ($\mathbf{Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \varepsilon}$) becomes:

$$\mathbf{Y= 0\ .201 + 0.425\ X_1 + 0.\ 367X_2 + 0.047X_3 - 0.361X_4 + 0.697X_5 - 0.043X_6}$$

From the regression model obtained above, a unit change in customer deposits holding the other factors constant would lead to increase in return on assets by a factor of 0.425, a unit change in Cash balance while holding the other factors constant would an increase in return on assets by a factor of 0.367, a unit change in Liquidity gap, while holding the other factors constant would lead to an increase in return on assets by a factor of 0.047, a unit change in non-performing loans, while holding the other factors constant would lead to an decrease in return on assets by a factor of 0.036, a unit change in size of the firm while holding the other factors constant would lead to an increase in return on assets by a factor of 0. 697. A unit change in financial leverage while holding the other factors constant would lead to a decrease in return on assets by a factor of 0.043.

The analysis was undertaken at 5% significance level. The criteria for comparing whether the predictor variables were significant in the model was through comparing the obtained probability value and α=0.05. If the probability value was less than α, then the predictor variable was significant otherwise it wasn't. All the predictor variables were significant in the model as their probability values were less than α=0.05.

The findings above conform to findings by Uzhegova (2010) that size of the bank is directly related to financial performance, the findings concur with Carter and Rogers (2006) who found out that customer deposits is positively related with return on assets. The findings also concur with and Humphrey (1992) that non-performing loans can lead to efficiency problem for banking sector. DeYoung and Whalen (1994), found that failing banks tend to be located far from the most-efficient frontier because banks don't optimize their portfolio decisions by lending less than demanded. What's more, there are evidences that even among banks that do not fail, there is a

negative relationship between the non-performing loans and performance efficiency (Kwan and Eisenbeis (1994), Hughes and Moon (1995), Resti (1995)).

4.5 Discussion of the Findings

On the correlation analysis the study found that there was positive correlation coefficient between return on assets and customer deposits, as shown by correlation factor of 0.659, this relationship was found to be statistically significant as the significant value was 0.001 which is less than 0.05, the study found strong positive correlation between return on assets and cash balance as shown by correlation coefficient of 0.609, the significant value was 0.000 which is less than 0.05, the study found weak positive correlation between return on assets and liquidity gap as shown by correlation coefficient of 0.048, the study found that there was negative correlation coefficient between return on assets and non-performing loans, as shown by correlation factor of -0.139, this relationship was found to be statistically significant as the significant value was 0.000 which is less than 0.05 , the study found positive correlation between return on assets and size of firm as shown by correlation coefficient of 0.767, the significant value was 0.003 which is less than 0.05, the study found a negative correlation between return on assets and financial leverage as shown by correlation coefficient of -0.0438.

From the findings Adjusted R squared is coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable. From the findings in the above table the value of adjusted R squared was 0.877 indication that there was variation of 76.9 percent on financial performance of commercial banks due to changes in in customer deposits, cash balance, liquidity gap, non-performing loans, size of firm, and leverage at 95 percent confidence interval. This shows that 76.9 percent changes in return on assets of commercial

banks could be accounted to changes in customer deposits, cash balance liquidity gap, non-performing loans, size of firm, and leverage. R is the correlation coefficient which shows the relationship between the study variables, from the findings shown in the table above there was a strong positive relationship between the study variables as shown by 0. 877.

From the ANOVA statics, the study established the regression model had a significance level of 0.000 which is an indication that the data was ideal for making a conclusion on the population parameters as the value of significance (p-value) was less than 5%. The calculated value was greater than the critical value (9.679>2.56) an indication customer deposits, cash balance liquidity gap, non-performing loans, size of firm, and leverage all have a significant effects on return on assets of commercial banks in Kenya. The significance value was less than 0.05 indicating that the model used was significant.

4.6 Summary

This chapter presented analysis and findings of the research. The objective of this study was to establish the relationship between liquidity risk and financial performance of commercial banks in Kenya between 2010 -2014. It was established that all the measures of liquidity risk analysed (including customer deposits, cash balance, liquidity gap, non-performing loans, size of firm, and leverage) have a significant effects on financial performance of commercial banks in Kenya.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents summary of the study findings, conclusion and recommendations. The objective of this study was to establish the relationship between liquidity risk and financial performance of commercial banks in Kenya between 2010 -2014.

5.2 Summary of the Findings

The study investigated the trends in customer deposits, cash balance, liquidity gap, non-performing loans, size of firm, and leverage commercial banks in Kenya between 2010 -2014. The study established that there has been an increase in value of customer deposits over the five year period. According to Elyor (2009) this increment was attributed to the increased usage in mobile banking that enables customers to access bank services at their convenience using internet resources. This has however led to an increase in customer deposits among commercial banks in Kenya.

The findings also indicated that increase in value of cash balance over the five year period studied. In addition it was established that there has been an increase in volume of liquidity gap in commercial banks of Kenya over the five year period studied. The findings revealed that there have been a significant increase in Size of firms during the five-year period. The study found that the year 2012 recorded the highest value of non-performing loans while the year 2014 recorded the lowest value of non-performing loans. This implied that there has been an irregular trends in the volume of non-performing loans over the five year period studied. Based on the findings the

year 2011 recorded the highest ratio of leverage while the year 2014 recorded the lowest value of leverage. This implied that there has been an irregular trends in the leverage ratios over the five year period studied.

The study found that there was positive correlation coefficient between return on assets and customer deposits, cash balance and size of firm .The study found a weak positive correlation between return on assets and liquidity gap. It was established that low levels of liquidity gap affected the banks financial performance positively while high levels of liquidity affected the ROA in banks negatively. The study found that there was negative correlation coefficient between non-performing loans, financial leverage and return on assets.

The study also found that leverage (total debt to assets) and liquidity gap have a negative impact on return on assets. These results are consistent with the previous studies. Abor (2007) concluded that ratio of assets to liabilities and capital structure, especially long term and debt ratios have a negative effect on performance of SMEs. There have also been some other studies that have proved empirical evidence supporting this negative relationship between debt levels and ROA (Cassar& Holmes, 2003; Kyereboah-Coleman, 2007; Silva, 2008).

Adjusted R squared is coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable. From the findings in the above table the value of adjusted R squared was 0.769 indication that there was variation of 76.9 percent on financial performance of commercial banks due to changes in customer deposits, cash balance liquidity gap, non-performing loans, size of firm, and leverage at 95 percent confidence interval. This shows that 76.9 percent changes in financial performance of commercial banks could be accounted to changes in customer deposits, cash balance liquidity gap, non-performing loans,

size of firm, and leverage. R is the correlation coefficient which shows the relationship between the study variables, from the findings shown in the table above there was a strong positive relationship between the study variables as shown by 0. 877.

From the ANOVA statics, the study established the regression model had a significance level of .000 which is an indication that the data was ideal for making a conclusion on the population parameters as the value of significance (p-value) was less than 5%. The calculated value was greater than the critical value (9.679>2.56) an indication customer deposits, cash balance liquidity gap, non-performing loans, size of firm, and leverage all have a significant effects on return on assets of commercial banks in Kenya. The significance value was less than 0.05 indicating that the model was significant.

From the regression model obtained above, a unit change in customer deposits holding the other factors constant would lead to increase in return on assets by a factor of 0.425, a unit change in cash balance while holding the other factors constant would an increase in return on assets by a factor of 0.367, a unit change in liquidity gap, while holding the other factors constant would lead to an increase in return on assets by a factor of 0.048, a unit change in non-performing loans, while holding the other factors constant would lead to an decrease in return on assets by a factor of 0.036, a unit change in size of the firm while holding the other factors constant would lead to an increase in return on assets by a factor of 0. 697. A unit change in financial leverage while holding the other factors constant would lead to a decrease in return on assets by a factor of 0.043.

The study noted that liquidity of banks was one of the major determinants of Kenyan banks profitability. This is the case because adequate liquidity helps the bank minimize liquidity risk

and financial crises. The bank can absorb any possible unforeseen financial position. The effect on profitability is higher when the liquid assets are not held exclusively, because exclusive liquid assets have no or little interest generating capacity. Also the opportunity cost of holding low return assets would eventually outweigh the benefit of any increase in the banks liquidity resiliency as perceived by funding markets, Mashhad (2012).

5.3 Conclusion

Liquidity problems may adversely affect a given bank's earnings and capital. Under extreme circumstances, it may cause the collapse of an otherwise solvent bank. 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 balance, raising customer deposit base, decreasing the liquidity gap, financial leverages and NPLs. Adequate cash reserves will decrease the bank's reliance on the repo market. This will reduce the cost associated with over the night borrowing. Moreover, it will also help the banks to avoid fire sale risk.

The findings established that banking environment in Kenya has, for the past five years undergone many regulatory and financial reforms. The study concludes that commercial banks dominate the financial sector in Kenya and as such the process of financial intermediation in the country depends heavily on commercial banks. Commercial banks are affected by both the external and internal factors. Bank-specific factors including customer deposits, cash balance liquidity gap, non-performing loans, size of firm, and leverage have a statistically significant impact on liquidity hence affecting the performance. The study further concludes that in a country where the financial sector is dominant any failure in the sector has an immense implication on the economic growth of the country due to the fact that any bankruptcy that could

happen in the sector has a contagion effect that can lead to bank runs, crises and bring overall financial crisis and economic tribulations.

Liquidity risk not only affects the performance of a bank but also its reputation. A bank may lose the confidence of its depositors if funds are not timely provided to them. The bank's reputation may become at stake in this situation. In addition to this, a poor liquidity position may cause penalties from the regulator. Therefore, it becomes imperative for a bank to keep a sound liquidity arrangement. Based on the findings liquidity risk has become a serious concern and challenge for the modern era banks. High competition for consumer deposits, a wide array of funding products in wholesale and capital markets with technological advancements have changed the funding and risk management structure (Akhtar, 2007).

Based on the findings the study concludes that profits are a necessity and a goal for many firms. Profits are not only a result, but also a necessity for successful banking in a period of growing competition on financial markets. Profit is the essential prerequisite of a competitive banking institution and the cheapest source of funds. Bank profits provide an important source of equity especially if re-invested into the business. This should lead to safe banks, and as such high profits could promote financial stability.

It is imperative for the bank's management to be aware of its liquidity position in different buckets. 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.

5.4 Recommendation for Policy

Liquidity risk arises 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 recommends that bank’s management should ensure the availability of sufficient funds to meet future demands of providers and borrowers, at reasonable costs.

The study found that liquidity has a significant effect on profitability, however when liquid assets are held exclusively they generate little or no interest at all. The study recommends that banks should maintain adequate liquidity levels though in the form of short term marketable securities in order to realize profits for the banks.

A bank having good asset quality, strong earnings and sufficient capital may fail if it is not maintaining adequate liquidity. The study recommends that banks should be equipped to deal with the changing monetary policy that shapes the overall liquidity trends and the banks' own transactional requirements and repayment of short term borrowing.

Based on the findings the study recommends that a policy on diversification should be put in place to avoid relying more on traditional bank activities. A policy that encourages commercial banks to engage in Non-interest income activities since non-interest income has a positive impact on bank performance. However, the regulatory authority should come in and homogenize prices of such activities in order to protect bank clients from being exploited. The policy instruments should allow commercial banks to manage Non-bank financial assets and intermediaries, including insurance products and underwriting.

The banks should stretch the accounts payable so that they can reduce the cash conversion cycle period. Banks can improve their liquidity by increasing the number of day’s accounts are payable

in as far as they do not strain their relationships with the creditors and reducing the cash conversion cycle up to an optimal level.

5.5 Limitation of the Study

The study used multiple regression analysis due to the nature of the study, yet it possesses assumptions which may not hold often. The study was limited to 43 commercial in Kenya, the study was limited to five year period from year 2010 to year 2014. The study was limited to secondary data, which was collected from financial annual reports of all the respective banks from the NSE and in the CBK website.

The research considered the influence of liquidity on financial performance of commercial banks in Kenya. However, there are other factors that might be significantly influencing the financial performance of these institutions. Assuming their influence to the financial performance while taking liquidity as the only factor effecting performance would hinder the understanding of the financial performance determinants in the sector.

The study was also limited to the commercial banks operating in Kenya only whereas other financial institutions are also affected in their financial performance by the liquidity. This makes the results of the study not generalizable to the financial sector since these institutions make part of a larger financial sector thus cannot be used a representation of the entire sector

5.6 Recommendation for Further Areas of Study

The current study investigated the relationship between liquidity risk and financial performance of commercial banks in Kenya between for period of five years. Further areas of study should be focus on a longer time span, probably 20 to 30 years. This would clarify whether the observed

relationship changes over the years. Such a study would call for advanced econometric and statistical analysis such as time series and panel data analysis.

A more detailed study should be undertaken that takes into consideration various factors influencing financial performance of financial institutions. Considering other factors in research would give the extent of each factor's influence and determination of the significantly influencing factor. This would also involve measuring financial performance with the profitability of the institutions.

Further research should also be undertaken which would include firms in various sectors of the economy and compare the different experiences created to these institutions due to the influence of the studied factors. This would aid in making general recommendations that would be employed by relevant authorities to ensure efficiency in financial performance of firms.

Also it would be really interesting to execute a qualitative research in order to answer how the firms' managers observe the relationship of liquidity and profitability that is if they observe a dilemma between these two financial indicators or they think they are interdependent.

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APPENDIX I: LIST OF COMMERCIAL BANKS

1. ABC Bank (Kenya)
2. Bank of Africa
3. Bank of Baroda
4. Bank of India
5. Barclays Bank
6. CFC Stanbic Bank
7. Chase Bank (Kenya)
8. Citibank
9. Commercial Bank of Africa
10. Consolidated Bank of Kenya
11. Cooperative Bank of Kenya
12. Credit Bank
13. Development Bank of Kenya
14. Diamond Trust Bank
15. Dubai Bank Kenya
16. Ecobank
17. Equatorial Commercial Bank
18. Equity Bank
19. Family Bank
20. Fidelity Commercial Bank Limited
21. GT Bank
22. First Community Bank
23. Giro Commercial Bank
24. Guardian Bank
25. Gulf African Bank

26. Habib Bank
27. Habib Bank AG Zurich
28. I&M Bank
29. Imperial Bank Kenya
30. Jamii Bora Bank
31. Kenya Commercial Bank
32. K-Rep Bank
33. Middle East Bank Kenya
34. National Bank of Kenya
35. NIC Bank
36. Oriental Commercial Bank
37. Paramount Universal Bank
38. Prime Bank (Kenya)
39. Standard Chartered Kenya
40. Trans National Bank Kenya
41. United Bank for Africa[2]
42. Victoria Commercial Bank

Source: Central Bank of Kenya (2014)

APPENDIX II: DATA USED

	YEAR	CUSTOMER DEPOSITS	CASH BALANCES	LIQUIDITY GAP	PROVN FOR NON PERFOMING LOANS	LEVERAGE	PBT
DIAMOND TRUST BANK							
	2010	32,689,208.00	2,120,539.00	5,421,470.00	190,527.00	1.93	654,980.00
	2011	36,274,080.00	2,264,047.00	8,355,743.00	295,682.00	1.05	798,567.00
	2012	44,903,973.00	3,345,349.00	15,155,670.00	557,854.00	0.71	890,345.00
	2013	55,772,275.00	4,420,715.00	19,722,355.00	588,789.00	2.52	990,452.00
	2014	72,505,118.00	5,348,310.00	25,559,789.00	984,696.00	1.45	845,980.00
HFCK							
	2010	10,088,797.00	186,880.00	723,334.00	98,747.00	0.05	450,258.00
	2011	12,232,645.00	319,835.00	419,931.00	225,487.00	0.13	650,235.00
	2012	15,945,317.00	420,377.00	420,390.00	238,445.00	0.13	949,200.00
	2013	18,671,586.00	384,034.00	6,118,820.00	186,297.00	0.43	845,250.00
	2014	22,968,209.00	1,454,346.00	6,453,339.00	197,766.00	0.40	975,250.00

EQUITY BANK							
	2010	48,977.00	12,018.00	4,838.00	875.00	0.38	2,800.00
	2011	65,825.00	10,004.00	608.00	880.00	0.33	4,525.00
	2012	95,204.00	11,747.00	11,848.00	1,558.00	0.25	7,890.00
	2013	125,492.00	19,130.00	16,778.00	1,533.00	0.35	9,458.00
	2014	142,386.00	35,467.00	5,320.00	1,456.00	0.57	12,580.00
KENYA COMMERIAL BANK							
	2010	109,844,869.00	13,284,166.00	73,107,320.00	2,836,050.00	0.05	4,892,450.00
	2011	163,029,350.00	19,870,878.00	87,381,529.00	314,961.00	0.11	6,945,026.00
	2012	196,974,651.00	26,997,823.00	142,755,383.00	875,411.00	0.06	9,256,209.00
	2013	210,173,514.00	20,138,633.00	116,024,849.00	426,371.00	0.58	10,256,583.00
	2014	223,493,278.00	18,908,695.00	114,357,710.00	1,610,710.00	0.07	13,950,453.00
CFC STANBIC BANK							
	2010	67,975,073.00	6,289,827.00	17,710.00	226,622.00	0.14	648,520.00
	2011	61,474,379.00	4,606,140.00	101,343.00	699,449.00	0.33	690,780.00
	2012	71,425,115.00	5,444,892.00	18,914.00	32,153.00	0.51	750,586.00

	2013	74,007,134.00	7,104,647.00	98,540.00	652,853.00	1.19	870,890.00
	2014	74,906,763.00	23,366,583.00	56,900.00	635,429.00	1.00	1,245,690.00
STANDARD CHATERED BANK							
	2010	76,898,456.00	7,380,062.00	69,487,996.00	365,349.00	0.19	3,450,760.00
	2011	86,773,652.00	7,728,872.00	90,075,280.00	474,936.00	0.08	3,608,905.00
	2012	100,504,065.00	8,210,822.00	102,240,374.00	332,321.00	0.12	5,790,654.00
	2013	122,323,049.00	12,005,054.00	115,811,022.00	412,739.00	0.27	7,457,901.00
	2014	140,524,846.00	13,575,454.00	117,374,139.00	716,650.00	0.31	8,560,345.00
CO-OPERATIVE BANK							
	2010	65,934,453.00	6,512,684.00	41,238,810.00	403,262.00	0.28	2,590,543.00
	2011	91,552,508.00	8,551,464.00	46,901,988.00	628,384.00	0.16	2,985,345.00
	2012	124,012,039.00	14,033,477.00	68,612,675.00	798,666.00	0.37	3,245,950.00
	2013	142,704,593.00	14,151,043.00	84,001,735.00	709,903.00	0.19	5,120,645.00
	2014	162,267,227.00	22,214,066.00	88,987,456.00	999,882.00	0.54	6,456,970.00
NIC BANK							
	2010	34,277,654.00	3,373,118.00	6,422,680.00	361,712.00	1.02	845,900.00

	2011	36,977,360.00	3,272,688.00	6,459,697.00	463,484.00	0.20	945,750.00
	2012	45,317,661.00	4,064,614.00	13,086,307.00	316,640.00	0.16	1,254,890.00
	2013	66,293,053.00	4,764,626.00	18,979,385.00	249,166.00	0.52	2,480,370.00
	2014	83,379,576.00	5,963,269.00	31,243,041.00	265,264.00	1.05	3,107,450.00
MIDDLE EAST BANK							
	2010	2,021,995.00	123,409.00	69,626.00	38,525.00	0.28	29,983.00
	2011	1,892,995.00	173,508.00	55,545.00	8,959.00	0.15	43,518.00
	2012	2,527,249.00	199,529.00	382,930.00	385.00	0.21	105,520.00
	2013	2,702,760.00	271,992.00	688,138.00	8,322.00	0.22	92,460.00
	2014	3,906,537.00	1,031,375.00	265,685.00	15,391.00	0.29	150,825.00
NATIONAL BANK							
	2010	34,277,654.00	3,373,118.00	6,422,608.00	361,712.00	0.08	(1,544,305.00)
	2011	41,995,446.00	7,888,863.00	6,788,330.00	145,320.00	0.07	240,640.00
	2012	47,804,607.00	4,845,862.00	8,518,647.00	362,653.00	0.07	489,035.00
	2013	56,728,163.00	5,564,998.00	6,794,498.00	692,423.00	0.05	956,950.00
	2014	55,191,425.00	5,460,991.00	7,019,002.00	725,626.00	0.06	1,250,564.00

DUBAI BANK							
	2010	1,031,794.00	145,313.00	159,098.00	107,312.00	3.43	9,250.00
	2011	986,200.00	185,106.00	509,768.00	84,899.00	2.37	18,480.00
	2012	1,211,409.00	186,641.00	498,552.00	60,818.00	1.62	33,192.00
	2013	1,560,914.00	273,664.00	358,120.00	81,603.00	0.30	20,770.00
	2014	1,445,978.00	290,820.00	769,034.00	113,790.00	0.43	39,156.00
CHASE BANK							
	2010	7,146,814.00	1,317,113.00	2,480,248.00	35,861.00	0.30	102,568.00
	2011	10,116,828.00	911,575.00	1,345,511.00	11,951.00	0.31	158,630.00
	2012	16,880,006.00	1,479,404.00	460,088.00	6,686.00	0.33	178,960.00
	2013	24,923,911.00	2,647,808.00	2,451,523.00	96,349.00	0.18	150,780.00
	2014	36,506,005.00	5,698,050.00	95,168.00	143,797.00	2.11	240,658.00
BANK OF AFRICA							
	2010	8,700,784.00	902,371.00	1,959,290.00	50,455.00	0.54	258,630.00
	2011	12,405,181.00	1,157,535.00	338,265.00	45,302.00	0.37	310,650.00
	2012	19,784,311.00	1,806,977.00	4,231,766.00	10,174.00	1.03	370,654.00
	2013	23,986,396.00	2,889,002.00	1,345,620.00	39,303.00	0.95	584,560.00

	2014	33,099,546.00	6,147,146.00	987,500.00	86,437.00	0.73	468,900.00
PARAMOUNT BANK							
	2010	3,123,480.00	245,905.00	268,210.00	22,879.00	1.15	150,822.00
	2011	3,512,356.00	564,750.00	250,651.00	30,568.00	1.05	180,941.00
	2012	3,562,380.00	437,542.00	272,052.00	26,701.00	0.10	280,873.00
	2013	3,673,838.00	213,377.00	359,997.00	10,255.00	0.07	112,802.00
	2014	4,156,090.00	435,893.00	404,155.00	12,565.00	1.25	184,245.00
GIRO BANK							
	2010	5,127,130.00	327,574.00	1,356,727.00	26,281.00	1.15	125,608.00
	2011	5,943,974.00	424,909.00	1,708,421.00	13,824.00	1.03	185,083.00
	2012	8,308,000.00	591,670.00	2,699,634.00	28,980.00	0.57	634,334.00
	2013	10,069,206.00	94,096.00	1,944,703.00	11,324.00	0.45	782,495.00
	2014	10,419,779.00	103,713.00	2,160,405.00	96,925.00	0.26	828,952.00
CREDIT BANK							
	2010	2,990,680.00	766,245.00	1,035,890.00	125,690.00	0.98	38,167.00
	2011	3,125,065.00	500,782.00	8,790,345.00	115,675.00	0.95	46,182.00
	2012	3,258,488.00	258,198.00	773,662.00	111,832.00	0.80	33,612.00

	2013	3,937,417.00	3,266,880.00	1,517,200.00	57,859.00	0.75	51,282.00
	2014	4,189,050.00	2,856,902.00	1,345,905.00	67,453.00	0.57	69,483.00
ABC BANK							
	2010	6,679,056.00	678,345.00	815,972.00	70,453.00	0.23	230,125.00
	2011	7,180,331.00	558,808.00	480,404.00	68,544.00	0.18	243,525.00
	2012	8,305,790.00	674,415.00	1,194,361.00	40,427.00	0.20	476,689.00
	2013	10,690,542.00	500,756.00	1,489,203.00	65,548.00	0.14	501,245.00
	2014	11,056,798.00	456,244.00	1,342,967.00	59,354.00	0.13	528,645.00
PRIME BANK							
	2010	15,617,394.00	1,343,984.00	347,286.00	145,001.00	0.20	460,360.00
	2011	19,987,650.00	1,446,990.00	620,670.00	145,990.00	0.43	684,950.00
	2012	25,430,551.00	1,686,371.00	4,468,858.00	145,435.00	0.02	769,630.00
	2013	28,763,569.00	1,957,264.00	1,234,437.00	197,690.00	0.22	1,068,367.00
	2014	30,235,990.00	2,245,680.00	3,892,450.00	200,459.00	0.23	1,650,185.00
DEVELOPMENT BANK OF KENYA							
	2010	2,231,147.00	167,545.00	49,613.00	46,383.00	5.43	169,199.00
	2011	2,411,091.00	163,988.00	92,721.00	67,440.00	11.03	189,275.00

	2012	4,105,025.00	356,242.00	98,235.00	67,942.00	10.87	235,623.00
	2013	4,635,590.00	452,270.00	104,890.00	62,855.00	9.54	385,948.00
	2014	5,003,894.00	490,267.00	115,652.00	70,258.00	11.86	465,948.00
I&M BANK							
	2010	28,354,656,664.00	1,873,640,881.00	6,371,667.00	171,532,724.00	1.08	689,450,500.00
	2011	34,799,004,763.00	2,813,885,369.00	7,483,906.00	117,338,754.00	0.72	569,045,600.00
	2012	45,994,961,254.00	3,243,399,025.00	3,683,826.00	330,282,426.00	0.63	890,258,450.00
	2013	56,943,705,296.00	4,194,306,060.00	3,776,643.00	179,882,130.00	1.02	919,054,050.00
	2014	65,640,244,868.00	4,247,943,202.00	7,285,571.00	14,167,545.00	0.82	1,290,348,750.00
FIDELITY BANK							
	2010	3,778,058.00	273,271.00	1,174,011.00	16,562.00	0.62	35,485.00
	2011	4,888,219.00	952,893.00	1,101,998.00	40,655.00	2.61	52,007.00
	2012	7,204,224.00	722,285.00	1,643,753.00	116,221.00	2.47	376,588.00
	2013	8,352,881.00	850,211.00	1,755,992.00	180,290.00	2.55	485,192.00
	2014	8,256,790.00	835,224.00	1,876,930.00	198,430.00	2.43	568,485.00

BARCLAYS BANK							
	2010	126,408.00	13,695.00	73,888.00	1,282.00	0.91	7,814.00
	2011	125,869.00	9,751.00	98,372.00	513.00	0.70	9,842.00
	2012	123,826.00	13,131.00	102,381.00	1,200.00	1.71	13,553.00
	2013	124,207.00	12,212.00	97,631.00	729.00	1.78	12,013.00
	2014	137,915.00	16,486.00	110,504.00	144.00	1.86	11,492.00
TRANS-NATIONAL BANK							
	2010	172,450.00	348,261.00	245,785.00	35,268.00	0.98	115,792.00
	2011	1,844,938.00	244,764.00	158,334.00	33,600.00	0.57	136,184.00
	2012	3,010,470.00	378,979.00	1,457,397.00	61,545.00	2.00	158,582.00
	2013	5,241,741.00	590,497.00	1,479,693.00	64,224.00	1.73	294,928.00
	2014	6,451,636.00	849,079.00	2,499,944.00	50,663.00	0.14	385,192.00
ORIENTAL BANK							
	2010	1,314,414.00	307,175.00	367,820.00	36,696.00	0.93	68,219.00
	2011	2,011,798.00	267,093.00	412,820.00	9,838.00	0.05	47,330.00
	2012	3,266,148.00	429,510.00	424,840.00	50,112.00	0.22	79,412.00

	2013	3,694,362.00	363,033.00	280,271.00	45,390.00	0.21	86,502.00
	2014	4,806,224.00	764,759.00	129,267.00	3,723.00	0.20	120,415.00
ECO BANK							
	2010	8,341,460.00	631,856.00	2,273,470.00	36,635.00	0.17	43,877.00
	2011	10,818,797.00	792,521.00	1,659,614.00	757,782.00	0.22	61,073.00
	2012	16,493,841.00	1,452,745.00	5,702,185.00	227,956.00	0.07	11,637.00
	2013	16,566,403.00	1,590,645.00	9,789,850.00	40,347.00	0.10	169,740.00
	2014	21,475,301.00	2,884,485.00	1,770,215.00	176,715.00	0.30	210,080.00
CONSOLIDATED BANK							
	2010	3,278,716.00	387,998.00	1,513,917.00	63,836.00	0.26	178,256.00
	2011	4,881,920.00	493,483.00	1,905,657.00	102,897.00	0.44	(125,840.00)
	2012	8,008,438.00	670,452.00	1,810,811.00	117,589.00	0.48	178,256.00
	2013	12,010,250.00	1,209,723.00	3,002,824.00	81,989.00	0.49	458,250.00
	2014	13,324,851.00	1,419,509.00	2,975,900.00	167,599.00	0.38	650,145.00