THE EFFECTS OF ASSET LIABILITY MANAGEMENT ON THE FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA

BY

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DECLARATION

I, the undersigned, declare that this research is my own work and has never been presented in any other university or college for a degree or any other award.

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DEDICATION

With special dedication and admiration, I dedicate this research to my parents Simatwa and Mokami.

ABSTRACT

Commercial banks are the oldest and most diversified of all financial intermediaries. A sound, progressive and dynamic banking system is a fundamental requirement for economic development. As an important segment of the tertiary sector of an economy, commercial banks act as the backbone of economic growth and prosperity by acting as a catalyst in the process of development. At the macro level, a sound and profitable banking sector is better able to withstand negative shocks and contributes to the stability of the financial system. ALM is considered a strategic discipline that influences the financial performance. However, ALM has her own challenges since each client has a particular objective, risk tolerances, and constraints, and it would be difficult to devise an optimization algorithm that would realistically account for these specific characteristics when evaluating portfolio allocation decisions. This study sought to establish the effect of ALM on the financial performance of the banks. To achieve this objective, the study employed a descriptive research design to study the relationship between ALM and financial performance of the banks. The study collected data on assets and liabilities all commercial banks supervised by CBK for the period between 2010-2014. Inferential statistics such as correlation and regression were adopted to establish the relationship and effect of the ALM on the financial performance of banks. The study found that quality of assets affects the financial performance of banks. The proportion of NPL to total loans was found to have an inverse relationship with financial performance. The level of liquidity had a significant relationship with financial performance. An increase in liabilities to assets negatively affected the financial performance of banks and vice versa. There was significant relationship between operational efficiency and financial performance of banks. Capital adequacy had insignificant relationship with ROE of banks. The findings shows that ALM such as loans, liability levels, levels of efficiency have a direct effect on the performance of banks.

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LIST OF ABBREVIATIONS

ALCO	Asset Liability Management Committee
ALM	Asset Liability Management
AQ	Asset Quality
CA	Capital Adequacy
CAMEL	Capital Adequacy, Asset Quality, Management Efficiency, EarningsPerformance, Liquidity
CBK	Central Bank of Kenya
ES	Efficient Structures
GDP	Gross Domestic Product
MP	Market Hypothesis
NPL	Non-Performing Loans
RMP	Relative Market Hypothesis
ROA	Return on Assets
ROE	Return in Equity
SBI	State Bank of India
SCP	Structure Conduct Performance

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Commercial banks are the oldest and most diversified of all financial intermediaries. Banks have in the past 10 years made tremendous growth profits and asset growth in Kenya. Banks like other business enterprises aim to earn profits and grow their balance sheet. They earn profits principally by obtaining funds at relatively low interest rates and then lending the funds or investing in securities at higher interest rates. The balance sheet of any bank means that it's assets indicates what the bank owns or claims that the bank has on external entities (individuals, firms, governments and other banks). A bank's liabilities indicate what the bank owes, or claims that external entities have on the bank (Saunders, 2008).

A sound, progressive and dynamic banking system is a fundamental requirement for economic development. As an important segment of the tertiary sector of an economy, commercial banks act as the backbone of economic growth and prosperity by acting as a catalyst in the process of development. They inculcate the habit of saving and mobilize funds from numerous small households and business firms spread over a wide geographical area. The funds so mobilized are used for productive purposes in agriculture, industry and trade (Vossen, 2010).

This study focused on the financial performance of commercial banks in Kenya. Aburime(2008) observed that the importance of bank financial performance can be appraised at the micro and macro levels of the economy. At the micro level, profit is the essential Prerequisite of a competitive banking institution and the cheapest source of funds. It is not merely a result, but also a necessity for successful banking in a period of growing Competition on financial markets. Hence the basic aim of every bank management is to maximize profit, as an essential requirement for conducting business.

At the macro level, a sound and profitable banking sector is better able to withstand negative shocks and contributes to the stability of the financial system. 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 (Flamini et al, 2009). However, too high profitability is not necessarily good. Uzhegova (2010) observed that too high profitability could be indicative of market power, especially by large banks. This may hamper financial intermediation because banks exercising strong market power may offer lower returns on deposit but charge high interest rates on loans. Too low profitability, in turn, might discourage private agents (depositors and shareholders) from conducting banking activities thus resulting in banks failing to attract enough capital to operate. Furthermore, this could imply that only poorly capitalized banks intermediate savings with the corresponding costs for sustainable economic growth.

1.1.1 Asset Liability Management

According to Crockford, (1986) asset and liability management (often abbreviated ALM) is the practice of managing risks that arise due to mismatches between the assets and liabilities. The process is at the crossroads between risk management and strategic planning. It is not just about offering solutions to mitigate or hedge the risks arising from the interaction of assets and liabilities but is focused on a long-term perspective: success in the process of maximizing assets to meet complex liabilities may increase profitability. The traditional ALM programs focus on interest rate risk and liquidity risk because they represent the most prominent risks affecting the organization balance-sheet (as they require coordination between assets and liabilities).But ALM also now seeks to broaden assignments such as foreign exchange risk and capital management. According to the Balance sheet management benchmark survey conducted in 2009 by the audit and consulting company PricewaterhouseCoopers (PwC), 51% of the 43 leading financial institutions participants look at capital management in their ALM unit.

1.1.2 Financial Performance

Financial performance and financial profitability are frequently used as interchangeable terms, (Burkhardt& Wheeler, 2013). With the increasing number of analysis and research papers referencing financial performances, there is a need to

have basic understanding of definition of financial performance and its various measures, (Burckhardt, 2013). Therefore, choosing a particular measure of financial performance depends on how well it meets the intended purpose. Financial performance of a bank is defined as its capacity to generate sustainable profitability, (European Central Bank (ECB), 2010). Therefore we can say that financial performance of a bank is its ability to employ the available resources to increase shareholders' wealth and generate sustainable profits to strengthen its capital base through retained earnings to ensure future profitability.

Measurement of financial performance of any firm is crucial in deciding the strategies to be formulated to ensure that the firm is in the right path. This is particularly important in order to establish if a firm is making losses which if they become consistent may lead a firm to depleting its capital base, (ECB, 2010). Key drivers of measuring bank performances are earnings, efficiency, risk taking and leverage, (ECB, 2010). Firstly, a bank must be able to generate earnings to remain in operation, secondly, it should be efficient meaning it should be able to generate revenue from the given assets and make profits, thirdly, it should be able to adjust its earnings to overcome the various risks involved such as credit risk and finally it should be able to improve its results through the way it functions.

There are various ways through which bank performance can be measured. European Central Bank (2010) report has categorized them in to three major categories which are traditional, economic and market based measures. The traditional measures are similar to those used by other firms which include Return on Assets (ROA) which is the net income for the year divided by the total assets. The other measure is Return of Equity (ROE) which is the internal performance measure of shareholder's value and this is the most famous measure of financial performance. The Economic measures of performance aim at assessing the economic results generated by the bank from its economic assets. The market based measures depend on the way the capital market value the performance of firm as compared to its economic and accounting value.

1.1.3 Effects of Asset Liability Management on Financial Performance

According to Schoeb (2006), the primary goal of asset-liability management is to produce a high quality, stable, large, and growing flow of net interest income. This

goal is accomplished by achieving the maximum combination and level of assets, liabilities and financial risk. Asset Liability Management calls for the understanding of the interaction between the various types of risks to ensure that they are not evaluated in isolation. According to Schoeb (2006), the primary goal of asset-liability management is to produce a high quality, stable, large, and growing flow of net interest income. This goal is accomplished by achieving the maximum combination and level of assets, liabilities and financial risk. Asset Liability Management calls for the understanding of the interaction between the various types of risks to ensure that they are not evaluated in isolation. According to Schoeb (2006), the primary goal of asset-liability management is to produce a high quality, stable, large, and growing flow of net interest income. This goal is accomplished by achieving the maximum combination and level of assets, liabilities and financial risk. Asset Liability Management calls for the understanding of the interaction between the various types of risks to ensure that they are not evaluated in isolation.

1.1.4 Commercial Banks in Kenya

The banking industry has a major role in most economies which facilitate their development and they are therefore extremely important engines of economic growth. This is because, they are the important sources of finance in most economies for majority of the firms, they provide generally accepted means of payments since they are the main depository for the economy savings and finally, since most developing economies have liberalized their banking systems, their managers now have much freedom in how to run these banks in order to facilitate growth (Arun& Turner, 2004).

Commercial banks operations in Kenya are controlled by CBK which defines the environment in which these banks should operate. It also sets the various capital requirements that any commercial bank should operate by setting up minimum capital requirements. CBK Prudential Guidelines (PG) (2013) part 3 states that "Capital requirements for a specific institution may increase or decrease depending upon its risk profile". We therefore note that capital requirement by the CBK is associated to risk of the bank. The section goes further and sets a formula for determining minimum capital requirement (MCR) which will be calculated by dividing its Core and Total Capital by the sum of the value of its Risk-Weighted Assets for Credit Risk,

Market Risk and Operational Risk, to arrive at the minimum Tier One and Regulatory capital adequacy ratios respectively.

1.2 Research Problem

The issue of jointly managing assets and liabilities arises in a number of industries, such as banking, insurance, and pension funds, as well as at the level of individual households. The definitions of assets, liabilities, and risks are specific to each institution, but, very generally, assets may be viewed as expected cash inflows, and liabilities as expected cash outflows. Although short-term risks arising from the possibility that an institution's assets will not cover its short-term obligations are important to assess and quantify, ALM is usually conducted from a long-term perspective. It therefore suffices to say that, ALM is considered a strategic discipline that influences the financial performance as opposed to a tactical one to take market position (Choudhry, 2007).

In so far as the importance of the above discourse is concerned, ALM is an integral as it is a significant component/determinant of financial performance of any financial institution especially the commercial banks. According to Romanyuk (2010), ALM has its pros and cons that cannot go unmentioned if a balanced and scholarly approach is to be achieved in this research. He says that some of the challenges of ALM include but are not limited to; Firstly, each client has their particular objectives, risk tolerances, and constraints, and it would be difficult to devise an optimization algorithm that would realistically account for these specific characteristics when evaluating portfolio allocation decisions. Secondly, long term strategic decisions depend on factors whose forecasts may not be readily available to the bank. Thirdly, risk preferences and their changes over time must be translated into mathematical language, which is far from trivial.

Finally, a reasonable ALM model must put all of its different components (assets, liabilities, goals, institutional and policy constraints, etc.) together in a meaningful manner, which is difficult. Conversely, ALM has benefits whose real value far outweighs any of the aforementioned challenges. Firstly an understanding of the company's overall position in terms of its obligations; comprehensive strategic management and investment in view of liabilities; the ability to quantify risks and risk preferences in the ALM process; better preparation for future uncertainties; and,

ideally, gains in efficiency and performance from the integration of asset and liability management. If an ALM framework is well done and implemented, banks would make great and sustainable profitability and growth trends going by the value of the aforementioned benefits. It suffices to authoritatively say that proper formulation and implementation of ALM concept would spur financial performance.

However, if the data and statistics from the Citi research (2012) on Kenyan banks is something to go by, it is evident that poor ALM management has crippled if not weakened the growth of commercial banks in Kenya. This has led to the fall of some banks and to others, it has led to inevitable/forced mergers so as to remain afloat. This therefore warrants further study for ALM is essential to a strong banking sector hence its poor management can lead to catastrophic destruction to the financial sector of Kenya's budding economy.

This study addressed the following research question: What is the effect of asset liability management practices on the performance of commercial banks in Kenya?

1.3 Objective of the Study

This research study sought to find out the effect of asset liability management on financial Performance of commercial banks in Kenya.

1.4 Value of the Study

This study is expected to benefit the banks in appreciating the concept of asset liability management and to bring to light the extent of its adoption as a risk management tool. In the present scenario, Asset liability management is important for the banking industry due to deregulation of interest rate regime. It helps to assess the risks and manage the risks by taking appropriate actions. So, to understand the Asset liability management process and various strategies that are helpful for the banks to manage the liquidity risk, this topic is selected. Therefore, it would be beneficial for me to develop my knowledge regarding the Asset liability management process, functions and its effect on the liquidity risk in Commercial banks.

The research study might contribute and form the basis for further research into the application of innovative asset liability management strategies in liquidity risks by similar industry players. This can go a long way in coming up with even better and more efficient strategies that are specific to different bank sizes, markets in which they operate and balancing of the different risk appetites that may be present within the different banks.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter highlights the literature relating to the research topic. This section deals with the review of theories relating to asset liability management and financial performance; general literature review; review of empirical studies and finally give a conclusion from the literature review indicating the gaps the research is addressing and the original contribution it will make to the field in general.

2.2 Theoretical Review

Different scholars have looked at financial performance in different contexts, while analysing different variables they have given different theories behind the experienced financial performance in different financial institutions. Some of them include: The Liability Management Theory, the Market Power (MP) and Efficiency Structure (ES) theories (Athanasoglou et al, 2006).The asset allocation theory, The Portfolio Theory has also added greater insight in to the study of bank financial performance (Nzongang and Atemnkeng, 2006) and the evolution of Asset Liability Management Greuning (2003)

2.2.1 Evolution of Asset Liability Management

Gardner and Mills (1994) used a multivariate analysis to conduct a study on risk classification for residential mortgage loans. He found that until the 1970s the business of banking consisted of extension of credit which was a simple intermediation of deposits that had been raised at a relatively low cost; and bank managers faced fairly simple decisions concerning loan volumes, pricing and investments. Greuning (2003) noted that the key managerial challenges of the past were controlling asset quality and the resulting loan losses, as well as managing of overhead expenditures, and that With the background of recession, volatile interest rates and inflation during the late 1970s and early 1980s, the management of both assets and liabilities became necessary in order to maintain satisfactory margin performance. He notes further that the complexity of balance sheet management also

continued to increase due to the deregulation in the 1980s, with growing competition for funds becoming a primary management concern.

The era of deregulation and competition continued further in the 1990s and this environment underscored the need for competitive pricing and for an increase in engagement of liabilities in a manner that would result in spread maximization as well as controlled exposure to related risks. The inverse relation in these two goals called for a balancing act between spread maximization and controlling the risk exposure in financial management and in regulation and supervision of banks. In Sinkey (1992) using regression analysis conducted a study on commercial bank financial management and found that asset/liability management was earlier carried out in a fragmented manner throughout the institutions (banks, savings & loan, insurance companies and thrifts). He further pointed out that different Asset Liability Management activities were carried out at different levels. For example, planning for capital was done by the corporate finance department, risk management by the treasury group, investment functions by the investment planning group and so on. Hence, the exercise was carried out in a disjointed manner and was functions-specific. These fragmentations lead to different approaches, logical applications and methodologies being adopted. The Asset Liability Management function has emerged as a discipline in its own right. With professionals and top senior level managing this exercise, it is no longer fragmented.

2.2.2: Asset Allocation Theory

Assets held by commercial banks can be classified into Primary reserves, secondary reserves, bank loans and investments, according to Kidwell (1990). Primary reserves refer to cash assets on a bank's balance sheet. They consist of vault cash, deposits with correspondent banks, and deposits with the central bank. They are immediately available at no cost to the bank to accommodate deposit withdrawals. He specified that because they yield no interest, banks try to minimize their holding. Secondary reserves on the other hand are short-term assets that can be converted quickly into cash at a price near their purchase price. In his view, their main purpose is to provide the bank with additional liquidity while safely earning interest income. This group is composed of treasury bills, and short-term securities. They are highly marketable and have low default risk but they yield below loans and other investments in a bank

holding. Bank loans are loans made to business firms and individuals by banks. They are usually less liquid and riskier than other bank assets therefore they carry the highest yield of all bank assets and offer greatest potential for profits. In Sinkey (1992) it was pointed that the primary function of an investment portfolio is to provide income and tax advantage to the bank rather than liquidity. Open market investments are typically long-term securities that are less marketable and have higher default risk than secondary securities. Investments offer greater income potential to banks. Investments for income include long-term treasury securities, municipal bonds and agency securities. Greuning (2003) also said that the proportion of liquid assets that a bank should hold is a question of whether profitability or liquidity is preferred.

The high proportions of primary and secondary reserves mean greater liquidity. These highly liquid assets unfortunately have low returns. Kidwel (1990) concluded that the overall bank strategy is therefore to hold minimum amounts of primary and secondary reserves consistent with bank safety. The total amount of primary and secondary reserves a bank hold is related to deposit variability, other sources of liquidity, bank regulations and the risk posture of the bank management.

The work of Markowitz (1952), called "Portfolio Selection", proposed that the investor should take into account the impact of a risky security on not only a portfolios expected return but also its variability of return. He suggested that primary function of portfolio management is to identify an asset allocation strategy that provides the highest expected (mean) return for a given level of risk that is acceptable to the investor. Markowitz paper introduced the concept of the asset allocation, which represents the set of optimal combinations of risky assets for each level of risk. In the absence of borrowing, rational and risk-averse investors will want to select a strategy that is on the asset allocation. Under the Markowitz model, given riskless lending and borrowing rates and all investors working with the same set of inputs, all investors will prefer a single portfolio of risky assets. This is referred to as the optimal portfolio.

The portfolio theory approach is the most relevant and plays an important role in bank performance studies (Nzongang and 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 hence creating a major gap in the ALM management. (Nzongang and Atemnkeng, 2006).

2.2.3 The Asset - Liability Management Theory

Since the early 1960s, the loan portfolios of commercial banks have been affected by the emergence of a new theory, which became known as the liability-management theory. This is one of the important asset liability management theories and says that there is no need to follow old ALM norms like maintaining liquid assets, liquid investments etc. Lately, banks have focused on liabilities side of the balance sheet. According to this theory, banks can satisfy ALM needs by borrowing in the money and capital markets. The fundamental contribution of this theory was to consider both sides of a bank's balance sheet (Emmanuel, 1997).

Today, banks use both assets and liabilities to meet ALM needs. Available sources of ALM are identified and compared to expected needs by a bank's Asset and liability management committee (ALCO). Key considerations include maintaining high asset quality and a strong capital base that both reduces ALM needs and improves a banks access to funds at low cost. There is a short-run trade-off between ALM and profitability. In the long-run, if management is successful in managing ALM, then, long-term earnings will exceed other banks earnings, as will the capital (Koch and McDonald, 2003).

According to Oracle White Paper (2011), the core functions of Asset liability management consists of managing maturity gaps and mismatches while managing interest rate risk within the overall mandate prescribed by ALCO. The five key responsibilities and some usual activities initiated by the Asset liability management team include: managing structural gaps. This aspect of Asset Liability management stresses the importance of balancing maturities as well as cash flows on each side of balance sheet (i.e. deposits and loans) It strategizes dynamically on balancing the

gaps, issuing timely guidelines to adjust focus on right product types and tenors, and actively involve Asset liability committee in this process (Oracle White Paper, 2011),

Secondly, is the Duration. Duration is considered as a measure of interest rate sensitivity. The Macaulays duration is traditionally accepted as a good measure of length of portfolio or a measure of centre of gravity of discounted cash-flows over life of an asset or liability. It is a common practice to measure duration of portfolio for different product types as well as on an overall portfolio level and useful to simulate how duration of portfolio will be affected by future events (Oracle White Paper, 2011). According to Fabozzi (2003), Macaulay duration measures the weighted average time-to-maturity of the bonds cash flow. The weightings are the present values of cash flow.

Dynamic gap management and management of static gap are also major areas that are monitored since it is a normal practice to rely on dynamic gap reports to simulate future gap positions for assumed business volumes and exercise of options (e.g., prepayments). In addition to proposed new volumes, prepayment transactions and assumed deposit roll-overs which create a major ALM gap. (OracleWhite Paper, 2011).

2.2.4 The Market Power Hypothesis

There are two distinct approaches within the MP theory; the Structure-Conduct-Performance (SCP) and the Relative Market Power hypothesis (RMP) (Tregenna, 2009).

Smirlok (1985), subscribing to the efficiency hypothesis, considers market share as a proxy for efficiency. The efficiency hypothesis prevails when a significant positive correlation between market share and profitability is signaled. This method implicitly assumes that a higher market concentration is the main source of market power. Shepherd (1986) criticizes this method by considering that the direct source of market power is the domination of participants over the individual market, independently of the ultimate sources of such domination, hence the emergence of the Relative Market power (RMP) hypothesis. It is uniquely the banks with a large market share and diversified products that might exert their market power to determine prices and make profits.

Consequently, under the RMP hypothesis, individual market shares accurately determine market power and market imperfections. The RMP hypothesis is empirically proved when concentration introduced in the explanatory equations of performance is found non-significant in contrast to market share which should be positively and significantly correlated with price and/or profitability. Nevertheless, it is not obvious that employing market structure in these equations produces unambiguous results. A bank with a strong position in the market may either reinforce its domination over the market or achieve a higher efficiency.

The Structure-Conduct-Performance (SCP) hypothesis of Bain (1951) may be summed up as markets characterized by a structure with relatively few firms and high barriers to entry will conduct pricing aimed at achieving joint profit maximization through collusion, price leadership, or other tacit pricing arrangements. This type of price conduct should in turn yield profits and prices that are greater than the competitive norm.

According to the SCP approach, the level of concentration in the banking market gives rise to potential market power by banks, which may raise their financial performance. 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).

Unlike the SCP, the RMP hypothesis posits that bank financial performance is influenced by market share. It assumes that only large banks with differentiated products can influence prices and increase profits. They are able to exercise market power and earn non-competitive profits (Tregenna, 2009).

2.3 Factors Influencing Bank Financial Performance

In Recent literature emphasizes on including both measures of concentration and efficiency in analyzing performance of a firm/bank. Studies such as Katib (2004) and Samaad (2008) include measures of concentration and market power in their models. The market power variable is taken as a proxy of efficiency implicitly. These studies have been criticized for not including an exclusive measure of efficiency.

In accordance with the above theories and models, many studies have introduced some useful variables in the financial performance function of commercial banks to shed light on key factors that make a difference in bank financial performance. Such studies are not without ambiguity especially with regard to the measurement of the variables and the results reported thereafter. However there is general agreement that bank financial performance is a function of internal and external factors. Koch (1995) observed that the performance differences between banks indicate differences in management philosophy as well as differences in the market served.

Several studies (Elyor (2009), Uzhegova (2010)) have used CAMEL to examine factors affecting bank financial performance with relation to ALM with success. CAMEL stands for capital adequacy, asset quality, management efficiency, earnings performance and liquidity.

2.3.1 Asset's Quality and its Effect on Financial Performance

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 (Mwenga, 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. Hempel et al (1994) observed that banks with high loan growth often assume more risk as credit analysis and review procedures are less rigorous, however returns are high in such loans indicating a risk and return trade-off.

The extent of the credit risk depends on the quality of assets held by an individual bank. 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 financial performance of a bank

depends on its ability to foresee, avoid and monitor risks, possibly to cover losses brought about by risks arisen. Hence, in making decisions on the allocation of resources to asset deals, a bank must take into account the level of risk to the assets.

2.3.2 Liquidity Management and its Effect on Financial Performance

Liquidity Risk is the current or prospective risk to earnings and capital arising from a bank's inability to meet its liabilities when they fall without incurring unacceptable losses Greuning (2003). It arises when the cushion provided by the liquid assets are not sufficient to meet its obligations. The prerequisites of an effective liquidity risk management include an informed board, capable management, and staff having relevant expertise and efficient systems and procedures.

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 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. Levine (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).

2.3.3 Capital structure and its Effect on Financial Performance

Capital structure is defined as the composition of all the securities the firm issues in order to finance its operations (Brav&Maug, 1998). Capital structure is the way a firm combines equity and debt to gain the maximum value. The value of a firm is therefore defined as the market value of debt plus the market value of equity (Ross, Westerfield, Jaffe &Kakani, 2009). A firm should work towards maximizing its value and at the same time maximize the stockholders' interests and it should therefore establish what ratio maximizes the shareholders' interests (Ross et al., 2009).

According to Myers &Majluf (1984), industry sector can be a determinant of firm's capital structure decisions, given that the nature and composition of assets influence financing needs, as well as firm's capacity to provide creditors with assets as

collateral. Therefore, firms whose activities are based on tangible assets obtain debt more easily. On the contrary, firms whose activities are based on intangible assets associated with future growth opportunities experience more difficulty in obtaining credit.

The capital structure of banks is highly regulated. This is 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 liketo 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 (Koech, 1995). Beckmann (2007) argue that high capital leads to low profits since banks with a high capital ratio are risk-averse, they ignore potential (risky) investment opportunities and, as a result, investors demand a lower return on their capital in exchange for lower risk.

2.4 Review of Empirical Studies

Odhiambo (2006) did a survey of liability management practices in commercial banks in Kenya and found that regular and systematic appraisal of asset liability management policies was a common practice among most banks. Most banks also indicated that their Asset liability management systems were governed by guidelines set by the management board which is a cross functional outfit covering all the major functions in the bank this showed that Asset liability management is a highly strategic issue in most banks, regardless of their size, extensively utilized most of the conventional hedging instruments.

Vossen, (2010), in a study on Bank liquidity management noted that banks face two central issues concerning liquidity. Banks are responsible for managing liquidity creation and liquidity risk. He concluded that banks must change how to balance their liquidity risk and their role as liquidity providers by restructuring their liquidity

management strategies. Liquidity risk exposes banks to financial challenges. Banks attempt to control liquidity risk factors by balancing cash inflows and outflows and some even hold liquidity cushions for strategic purposes. Being exposed to too much liquidity risk expose banks to challenges such as; run away investors, runs by depositors, ratings downgrades, and tougher financing. These consequences are what banks wish to avoid and why they implement policies to protect themselves from liquidity risk.

Ashok (2009) in his study examined how the financial performance of State Bank Of India (SBI) group, nationalized banks group, private banks group and foreign banks group in India had been affected by the financial deregulation of the economy. The main objective of the empirical study was to assess the financial performance of scheduled commercial banks through CAMEL analysis. CAMEL stands for capital adequacy, asset quality, management efficiency, earnings performance and liquidity. The objectives of his study were to identify the optimal mix of assets and liabilities for the profitability of banks and to offer suitable suggestions to strengthen the funds position of commercial banks. He concluded that banking sector has to take greatest care on the variables which relate to asset liability management and that all the banking groups have to take necessary steps to improve the overall performance of the banking sector.

2.5 Summary of Literature Review

From the literature review a research gap was identified in the empirical studies. The importance of this research study was attempting to answer the research question; "What is the effect of asset liability management on the financial performance of commercial banks in Kenya." The landscape of the financial services industry has become increasingly competitive, coupled with rising costs of intermediation. Since ALM has a direct effect on the financial performance of banks, it is prudent to have an effective ALM process within banks that closely monitor and equalize both the assets and liabilities management. The studies highlighted above tried to link how asset liability management using some variables affecting profitability. This study on the other hand used more variables which are useful for banks financial performance in totality.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the research design and methodology of the study; it highlights a full description of the research design, the research variables and provide a broad view of the description and selection of the population. The research instruments, data collection techniques and data analysis procedures will also be pointed out.

3.2 Research Design

A research design is a plan, structure and strategy of investigation so conceived as to obtain answers to research questions or problems. A descriptive design will be used in the study. Descriptive research design is a type of research method that is used when a researcher wants to get information on the current status of a person or an object. It is used to describe what is in existence in respect to conditions or variables that are found in a given situation. In this research, descriptive research was used to determine the statistical association between the relationship of ALM variables and financial performance of commercial banks.

3.3 Population

The study examined the effect asset liability management on the performance of commercial banks in Kenya. The study included all banks supervised by the CBK. In all, 43 banks that qualify for this study. The justification of this population was the regulatory requirement by bank's institutions since the data was easily accessible.

3.4 Data Collection

Secondary sources of data were obtained from published sources such as the Central Bank of Kenya annual surveys and Banks supervision reports. The banking Survey is an annual publication that publishes annual financial statement of all banks in Kenya covering a period 5 years, while the Central Bank of Kenya publishes annually.

The data to be collected included: Return on equity ratios, asset quality ratios, capital adequacy, liquidity levels, operational efficiency levels and income diversification of the various commercial banks in Kenya.

3.4.1 Data Validity and Reliability

To ensure validity and reliability of the data collected, only published data in the form of financial statements which is a requirement by law was used. The boards of directors of each bank before publishing of any information have to attest to the validity and reliability and ensure that the statements show a true and fair view of the banks financial position. The CBK supervisory reports were also used which are published by the regulator itself therefore ensuring correct data.

3.5 Data Analysis

The data collected was analyzed using the computer software known as Statistical Package for Service Solution (SPSS) version 20.0. Descriptive, correlations and regression analysis was applied to study and compare the effect of independent variables on the dependent variable. In order to get a picture of the performance of the banks, the researcher employed ROE which is a measure of profitability. ROE reflects the ability of a bank's management to generate profits from the bank's assets and was calculated as net profit after tax divided by stakeholders' equity.

3.5.1 Analytical Model

Financial performance was the dependent variable while asset liability management components was the independent variables of the research study. The researcher used a two tailed t-test since the sample size was greater than 30 with a 5% statistic test of significance. The researcher computed correlation coefficient (r), coefficient of determination (r2) and analysis of variance (ANOVA) using the regression model below.

The study hypothesis that asset liability management has a positive relationship to financial performance of banks.

Financial Performance ROE = $\alpha + \beta 1\ X1 + \beta\ 2\ X2 + \beta 3\ X3 + \beta\ 4\ X4 + \beta 5\ X5 + +e$

Where;

Y denotes the dependent variable (Financial Performance) measured as Return on Equity

α is the value of the intercept.

β is the coefficient of the explanatory X variable.

e is the error term assumed to have zero mean and independent across time period.

X1 (Asset Quality) Ratio of Non-performing loans to total loans

X2 (Income Diversification) Ratio of non-interest income to total income

X3 (Liquidity) Ratio of Term liquid assets to total liability deposits

X4 (Operational Efficiency) Ratio of operating cost to net operating income

X5(Capital Adequacy) Ratio of total capital to total risk weighted assets

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents the data results, presentation and interpretation of the findings of the variables of the study. The chapter has several sections including descriptive statistics section which include the net profits of the banks, the asset quality, income diversification, liquidity, operational efficiency and capital adequacy. This section is followed by regression analysis section and lastly a section on the interpretation and discussion of the findings.

4.2 Descriptive statistics

4.2.1 Banks profit between 2010 and 2014

The researcher collected data on the profits of the banks from their published financial statements. This helped in knowing some top line information concerning the profitability of the banks for the period between 2010 -2014. The results shows that on average the banks sampled had a mean profits of Kshs 2.357 billion. The highest reported profit was Kshs 16.83 billion after tax profit while the least value was a loss of 0.481 billion as shown in table 4.1.

Table 4.1 Banks profit between 2010 and 2014

Mean	2357371.19
Skewness	2.048
Std. Error of Skewness	.228
Minimum	-481940
Maximum	16835990
N	112

4.2.2 Capital adequacy

The researcher collected data on the adequacy of the capital the banks reported on yearly basis for the period between 201 and 2014. This helped to gauge the extent to which banks could meet their risks with their available capital. From table 4.2, the mean capital adequacy values for the banks was 20.33%. However, the data was skewed to the right meaning that most of the distribution was above the mean. The highest value of capital adequacy reported was 41.50% while the lowest value was 8.87% as shown in table 4.2.

Table 4.2 Capital adequacy

Mean	20.3323
Mode	15.00[a]
Skewness	1.119
Std. Error of Skewness	.231
Minimum	8.87
Maximum	41.50
N	98

4.2.3 Liquidity

The researcher collected data on the liquidity of the banks to determine how liquid the banks were for the period between 2010 and 2014.the findings are shown in table 4.3

Table 4.3 Liquidity

Mean	38.9064
Mode	33.80
Skewness	1.756
Std. Error of Skewness	.244
Minimum	25.60
Maximum	84.80
N	98

From the findings, shown in the table 4.3.the mean value of liquidity ratio for the banks between 2010 and 2014 was around 38.90%. Although the distribution was positive. The minimum value of the liquidity was 25.6% while the highest value was 84.8%.

4.2.4 Asset Quality (AQ)

The quality of assets of the banks was determined by comparing the value of non-performing of total loans.

$$\text{Assets quality} = \frac{value\ of\ non-performing\ loans}{\text{Value of total loans}} \times 100$$

Table 4.4 Asset Quality (AQ)

Mean	3.8769
Skewness	2.194
Std. Error of Skewness	.234
Minimum	.00
Maximum	24.88
N	107

From table 4.4, the mean value of asset quality was 3.87%.meaning that non-performing loans in banks accounted for 3.87% of the total loans. The maximum value was 24% which implies that NPLs accounts for only 24% of the total loans.

4.2.5 Operational Efficiency

This was measured by determining the ratio of the cost of sales to sales. The value measure for the cost proportion of cost of sales to the total revenue

$$\text{O.R} = \frac{\text{cost of sale}}{\text{sales r}} \times 100$$

Table 4.5 Operational Efficiency

Mean	65.9732
Skewness	2.269
Std. Error of Skewness	.230
Minimum	22.39
Maximum	222.72
N	110

Table 4.5 shows a mean value of OE of 65.97%. This shows that the banks had on average a gross margin of 34.027%. The minimum value was 22.39% and the highest value has 222.72%. This represents a value whose loss was way above by 122.72%.

4.2.6 Income Diversification

The researchers collected information on the extent to which banks had diversified their sources of income. The value of income diversification was calculated through

$$I.D=\frac{\text{non-interest income}}{totsl\ revenue} \text{ x } 100$$

Table 4.6 Income Diversification

Mean	29.0582	
Skewness	1.669	
Std. Error of Skewness	.228	
Minimum	3.20	
Maximum	96.06	
N	112	

The mean value was 29.058%. This means that on average 29.058% of the total revenue of the banks were from non-interest operations. The least diversified bank had a score of 3.28% while the highly diversified bank had a value of 96.06%

4.2.7 Return on Equity (ROE)

The level of financial performance was measured by the ROE. This generated the rate of returns of the equity of a company

$$ROE=\frac{\text{net profits}}{totsl\ equity} \text{ x } 100$$

Table 4.7 Return on Equity (ROE)

Mean	20.2515
Skewness	-2.542
Std. Error of Skewness	.190
Minimum	-90.80
Maximum	49.40
N	164

Table 4.7 shows the return on revenue of the banks. The average return on revenue for the bank was 20.25%.However, most of the banks had higher levels of return on

revenue the ROE because as the distribution was negatively skewed. The least value was negative -90% to indication loss and the highest was 49.40%

4.3 Regression analysis

The regression test was done to establish the effect of capital adequacy, operational efficiency and income diversification on the banks financial performance

Table 4.8 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.873[a]	.763	.749	.0896917
a. Predictors: (Constant), CA, Asset quality, Income Diversification, liquidity , Operational Efficiency				

The model summary shows a R square value of 0.763. This shows that the predictions explain 76.38% of the variation in ROE. The remaining 23.7% is explained by other factors.

Table 4. 9 ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.277	5	.455	56.599	.000[b]
	Residual	.708	88	.008		
	Total	2.984	93			
a. Dependent Variable: ROA						
b. Predictors: (Constant), CA, Asset quality, Income Diversification, liquidity , Operational Efficiency						

The ANOVA results table shown above is a measure of goodness of fit the model. The values of F statistics given by **F (5,88)=56.599, p<0.001** shows that the predictors of the model are statistically significant in predicting (affecting) the ROE of banks. Therefore the parameters fit in the model.

Table 4.10 Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.703	.062		11.381	.000
	Asset quality	-.250	.266	-.058	-.941	.349
	Income Diversification	.347	.107	.185	3.235	.002
	liquidity	-.283	.105	-.185	-2.693	.008
	Operational Efficiency	-.665	.048	-.978	-13.958	.000
	Capital Adequacy	-.215	.183	-.083	-1.173	.244
a. Dependent Variable: ROA						

Table 4:10 shows that liquidity (p=0.008), income diversification (p=0.02) and operational efficiency (p<0.001) were significant predictors of financial performance (REO). The quality of assets and C.A was not a significant predictor of ROE.

Thus the resulting model was given by Y=bo +b1AQ+b2ID+b3L+b4OE+b5CA

Y=0.703-0.250AQ+0.347ID-0.283L-0647OE-0.215C.A

The above model shows that when all the factors are held constant the return on revenue would be 0.703. A unit increase in asset quality holding other factors constant would decrease financial performance by 0.250 units. A unit increase in diversification of income holding other factors constant would increase financial performance by 0.347. a unit increase in liquidity holding other factors constant would reduce the return on revenue by 0.283 this is holding other factors constant, a unit increase in operational efficiency would reduce the return on revenue by 0.665 units. Lastly a unit increase in C.A holding other factors constant would reduce the return on revenue by 0.215 units

4.4 Correlation analysis

The correlation analysis is shown in table 4.11

Table 4.11 Correlation analysis

		ROA	Asset quality	Income Diversification	liquidity	Operational Efficiency	CA
ROA	Pearson Correlation	1	-.215*	.004	.134	-.782**	.225*
	Sig. (2-tailed)		.026	.969	.191	.000	.019
Asset quality	Pearson Correlation	-.215*	1	.137	-.266**	.244*	-.134
	Sig. (2-tailed)	.026		.158	.009	.011	.175
Income Diversification	Pearson Correlation	.004	.137	1	-.277**	.359**	-.198*
	Sig. (2-tailed)	.969	.158		.006	.000	.040
liquidity	Pearson Correlation	.134	-.266**	-.277**	1	-.404**	.631**
	Sig. (2-tailed)	.191	.009	.006		.000	.000
Operational Efficiency	Pearson Correlation	-.782**	.244*	.359**	-.404**	1	-.444**
	Sig. (2-tailed)	.000	.011	.000	.000		.000
Capital Adequacy	Pearson Correlation	.225*	-.134	-.198*	.631**	-.444**	1
	Sig. (2-tailed)	.019	.175	.040	.000	.000	
*. Correlation is significant at the 0.05 level (2-tailed).							
**. Correlation is significant at the 0.01 level (2-tailed).							

The correlation test showed a significant negative correlation between assets quality and ROE(r=-0.215, p=0.026). The level of income diversity and ROE had an insignificant positive relationship(r=0.004, p=0.969). The liquidity and ROE had a positive insignificant correlation(r=0.134, p=0.191)

There was a strong negative correlation between operational efficiency and ROE (r2 -0.782, p<0.001) and also capital adequacy had a positive significant correlation with ROE

4.5 Interpretation and discussions of the findings

The study sought to determine the effect of asset liability management on financial performance of the banks for a period of 5 years from 2010 to 2014.

The study assessed the liquidity of the banks for the period specified. The mean value was 38.9% with a skewed specified distribution to the right. This means that most of the banks had liquidity levels of less than 38.9%.

The banks deal with loans and lend money to generate income from interest rate. This study measured the quality of assets by relating the amounts of NPLS with total loans. The mean value was 3.87% of the total loans. This is safe since default cases would not hurt the bank loan total by a greater proportion. However a higher value of 24% was reported and this would be risky since the value of NPLS was falling a relatively bigger proportion of total loans which could lead to bigger losses in cases of defaults.

The efficiency of an operations saves on time, cost and could increase on production of a bank. In this study the researcher estimated efficiency by comparing the cost of sales and the revenue. The study found a mean efficiency value of 65.973%. This translates to a markup value of 22.93%. However the study noted an efficiency score of 22.72 %(77.28% markup) from one of the banks. This was very good and a sign on an efficient bank on the contrary, a value of 122.72% was reported. This was a case of a bank whose cost of sales or expenses were more than the sales. This denoted an efficient bank.

The level of diversification of a bank could help to reduce level of risk. In this study the level of diversification was determined for the period 2010-2014. The mean value was 29.058% implying that on average the banks got 29% of their income from non-interest operations. The least income diversified bank had a value of 3.2% and the highest had 96.06%.

The return on equity for the bank was measured by the ratio of net profits/losses to the total equity. The average return on revenue for the banks was 20.25% since

distribution was negatively skewed. The best value recorded was 49.40% and the least value was -90%

To determine the effect of the variable and return on revenue. A regression test was run. The model predictions influenced 76.3% of variation in return on revenue. Further the predictions fitted the model since their overall influence on return on revenue was statistically significant F **(5, 88) =56.599, p<0.001.** The regression shows that increase in the quality of assets decrease the value of ROE. This is true since quality of assets was NPLs/total loans thus as the value increases more loans remain unpaid and thus the bank losses.

A decrease in value is associated with reduced NPL which means all the loans are being paid. The level of income diversity (**ID**) increases the return on revenue by 0.347 units. The liquidity of the bank negatively affected the return on revenue. This was justifiable since **L= (assets/liabilities).** Thus as the value decreased (increase in liabilities is increase in assets) the return on revenue was increasing since there was less cash outflow.

The study found that operational efficiency decreased the value of ROE. This was justified by the fact that efficiency was calculated by cost of sales/revenue. Thus as the revenue increased the value of operational efficiency decreased which was associated with high return on equity. Lastly the regression found that increase in capital adequacy reduced ROE by 0.215 units. As the rate of capital to the risk weighted assets increased this reduced the ROE.

The test for correct showed that there exists significant negative relationship between asset quality and ROE, liquidity and ROE, and capital adequacy and ROE. Income diversity and ROE had an insignificant positive correlation of 0.004. Liquidity was found to be insignificantly positively correlated with ROE. The above results show that there exists some significant relationships between ROE, assets and liability management.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS OF THE STUDY

5.1 Introduction

This chapter presents the summaries of the research project. The chapter has sections on the summary of the findings, conclusion and recommendations. There are also sections on limitations of the study and suggestion for further areas of research.

5.2 Summary of findings

The study concentrated on the banks from the year 2010 to 2014. The study was motivated by the need to establish the relationship on financial performance and ALM.

The study collected data on liquidity of banks which on average was 38.9%. The quality (AQ) was 3.87% implying that the proportion of WPL was not big compared to the value of loans. The banks had an average efficiency level of 65.973% thus cost of sales accounted for 65.97% of sales. On average the efficiency level of banks was 29%.

The regression result shows that asset quality (ration of non-performing to total loans) influence the value of ROE. The study found that increase in asset quality (increase in value on non-performing loans of banks/decrease of the total loans) reduced the financial performance of banks. The degree of diversification of income affected the financial performance of bank. An increase of the unit of source of income increase the financial performance.

The efficiency of operations of the banks achieved the financial performance of banks. A more cost effective bank generated high level of ROE. This was achieved when cost of sales went down thus lowering the efficiency level (efficiency=cost of sales/revenue from sales). The study found insignificant effects of liquidity and capital adequacy on ROE of banks.

The correlation results showed significant correlation between quality of assets and operational efficiency had significant positive correlation with financial performance. There was correlation between income diversification, liquidity and diversity of income sources had insignificant relationship with financial performance of banks.

5.3 Conclusions

The study concludes that quality of assets affects the ROE. This is because the increase in NPLs negatively affects the ROE. Further decrease in total loan reduces the interest income which in turn reduces ROE. The degree of diversification of income by banks influences the financial performance of banks. Banks with high level of diversity reported higher levels of ROE. This is because the low income generating activities were compensated by other highly profitable activities.

The liquidity of the bank affects ROE of the banks. An increase in the value of liquidity shows that the value of liabilities has decreased thus cash flow or increase in assets which both leads to decrease in cash. Thus any operations which drains the cash flow reduces the value of ROE.

The level of operational efficiency affects the ROE. The study shows that increase in cost of operations affect ROE negatively. A higher value efficiency was negatively related to ROE because (efficiency=cost of sales/sales revenue) thus increase in efficiency (increase in cost/decrease in revenue) affects ROE negatively.

The capital adequacy of a bank does not significantly affect the ROE. However the study found that increase in capital adequacy (increase in capital/decrease in risk weighted assets) had reduced the value of ROE.

5.4 Recommendations

The study found that the value of non-performing loans relative to the total loans affected the financial performance of banks. Thus it is recommended that banks ensure some limits of NPLs are not reached so as to improve on their financial performance.

The liquidity of a bank was found to have effect on the financial operations of bank. The higher value of current liabilities or current assets greatly affected the ROE. There is need for bank management to maintain optimism levels of working capital to improve on their performance.

The level of efficiency and ability to save on cost of sales increased the financial performance of banks. It is recommended that banks work on ways of increase their efficiency especially on cost of sales.

The study recommends that banks works on their capital to ensure that it is adequate and enough for their operations. The value of capital should be adequate and sustainable.

5.5 Limitations of the study

The study only collected data for Kenyan banks. The findings have not been compound with other banks in other countries. The study also suffers the limitations of unavailability of data in some banks. This reduced the sample size and eventually the representativeness of the study sample.

The study only concentrated on banks. This represents only one sector. Findings could be different in other sectors. This means that the relationship between ALM and financial performance in other sectors using the model are not known

5.6 Suggestions for further studies

The study was done in Kenya for the period 2010-2014 but the study has not bench marched the findings with other countries. It is thus suggested a similar study be done to bench the findings with other banks in other countries.

The study only concentrated on banks which represent only one sector of the economy. This left other sectors uncovered. A similar study in other sectors is desired to ensure full disclosure on the relationship between ALM and financial performance.

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APPENDICES

APPENDIX 1: LIST OF BANKS IN KENYA

1. ABC Bank (Kenya)
2. Bank of Africa
3. Bank of India
4. Bank of Baroda
5. Barclays Bank
6. CFC Stanbic Bank
7. Chase Bank (Kenya)
8. Charterhouse Bank ltd
9. Citibank N.A.
10. Commercial Bank of Africa
11. Consolidated Bank of Kenya
12. Cooperative Bank of Kenya
13. Credit Bank
14. Development Bank of Kenya
15. Diamond Trust Bank
16. Dubai Bank Kenya
17. Eco Bank
18. Equatorial Commercial Bank
19. Equity Bank
20. Family Bank
21. Fidelity Bank
22. Fina Bank (Kenya)
23. First Community Bank
24. Giro Commercial Bank
25. Guardian Bank
26. Gulf African Bank
27. Habib Bank AG Zurich
28. Habib Bank
29. Imperial Bank Kenya
30. Investment & Mortgages Bank
31. Jamii Bora Bank

32. Kenya Commercial Bank
33. K-Rep Bank
34. Middle East Bank Kenya
35. National Bank of Kenya
36. National Industrial Credit Bank
37. Oriental Commercial Bank
38. Paramount Universal Bank
39. Prime Bank (Kenya)
40. Standard Chartered Bank
41. Trans National Bank Kenya
42. United Bank for Africa
43. Victoria Commercial Bank