THE EFFECT OF FUNDING ON THE FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA

OWINO ALFRED OKOTH

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE IN FINANCE, SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI

2015

DECLARATION

This research project is my original work and has not been presented for examination in any other university.

Signature: ……. Date: ……..**.....**

Owino Alfred Owino

D63/73626/2012

This research project has been forwarded for examination with my approval as a University Supervisor.

Signature: …… Date: …….…….

Winnie Nyamute

Lecturer

School of Business

University of Nairobi

ACKNOWLEDGEMENT

While undertaking this research project, I received enormous support and guidance from various persons and entities, and I would like to take this opportunity to most sincerely express my gratitude to all of them. First, I would like to thank the Almighty God for giving me strength, good health and patience to undertake my studies.

I would also want to thank my supervisor, Winnie Nyamute, for her time, positive criticism, suggestions and encouragement in making this project a reality. Lastly, I want to thank the University of Nairobi for the opportunity to undertake my studies at university.

You are all valuable to me.

DEDICATION

To my wife Esther and my daughter Leila for your understanding, support and encouragement when I stayed away from home for many hours. To my mother Alice, my dad John, my brothers and sisters for your endless support and encouragement during my studies. May God shower you all with His favours in every good thing that you do.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS

CBK	Central Bank of Kenya
ECB	European Central Bank
GDP	Gross Domestic Product
GOK	Government of Kenya
HFCK	Housing Finance Company of Kenya Limited
KES	Kenya shillings
NIM	Net Interest Margin
ROA	Return on Assets
ROE	Return on Equity
USA	United States of America
SACCO	Savings and Credit Cooperative Society
MFI	Microfinance Institution

ABSTRACT

The study sought to establish the impact of funding on the financial performance of commercial banks in Kenya. Banks operate by attracting funds from various sources and lending these funds to customers. The difference between the cost of funds and the interest income from the loans determines banks' profitability. The aim of this study was to establish whether there is a relationship between funding and profitability of commercial banks in Kenya. The population of the study comprised of all the 44 commercial banks that were operating in Kenya during the period 2010 to 2014. For a bank to have qualified to be included in the sample of the study, it needed to have been in operation during the entire period of the study and therefore, institutions that were not in operation in the entire period of study were eliminated. The study employed the use of secondary data obtained from the Bank Annual Supervision Reports that were available on the website of the Central Bank of Kenya. Return on assets was used as a measure financial performance. Loans and advances to deposits ratio, loans to total assets ratio, and liquid assets to total assets ratio were used as measures of funding. The study used descriptive statistics and regression analysis to establish the relationship between the variables. The response rate was 97.7% in that 43 out of 44 banks satisfied the sampling criteria. The R^2 of the model was 0.2252 at a confidence level of 95% meaning that 2.25% of financial performance of commercial banks in Kenya is explained by funding. Therefore, 97.75% of financial performance of commercial banks in Kenya is attributable to factors other than funding. The study recommends that banks should retain a suitable mix of funding to satisfy both the profitability and liquidity objectives.

CHAPTER ONE

INTRODUCTION

1.1 Background

Banks play an important role in the economic development of a country by directing funds to the uses that yield the highest rates of returns and thus increasing specialisation and division of labour (Todaro, 2003). Funds from savers are used for financing economic activities. The banking sector is unique because of the risks that are faced by both savers and investors. A saver is often unable to select investment projects that best match his personal risk appetite. Without pooling money, savers cannot take advantage of increasing returns to scale in investments (Stiglitz, 1998). Investors, on the other hand, may not have money and may be faced with the challenge of borrowing from several sources thus increasing cost of borrowing.

Before 2007, financial markets were relatively stable, the global economic growth was strong and liquidity was abundant. ECB (2009) notes that the global recession that started in 2007 as a result of the mortgage problem in the USA, strained banks' funding sources, thus impacting negatively on banks that relied heavily on wholesale funding. Funding costs have since increased as the cost of financing through bonds and equities remains at historically high levels. Banks have reacted by changing their funding strategies and business models (ECB, 2012) and they have been turning away from wholesale funding to more stable retail deposits despite increasing competition in the market. Banks have also been strengthening their deposit base by investing more in customer relations. Olokoyo (2011) noted that deposits constitute the highest proportion of bank's liabilities.

Recent trends have pointed to increasing constraints faced by banks to access reliable and affordable funds and this is likely to have an impact to the profitability of banks as the cost of funding constitutes the highest proportion of the banking industry's expenses. Costs of funding in Kenya were 23.1% and 24.8% of banks' operating costs in 2013 and 2014 respectively (CBK, 2014) and these were closely followed by salaries and wages at 19.6% and 19.4% of operating costs.

1.1.1 Access to Funds

Banks are financial intermediaries that perform two broad functions: attracting funds and lending out these funds to make profits (Kashyap et al., 2002). Banks get loanable funds from customer deposits and these are generally categorised into three main classes: demand, savings and time deposits. Customer deposits are considered be to be relatively cheaper than wholesale funds and other non-deposit funds (Ianotta et al., 2007). In literature, deposits have traditionally been measured as total deposits over total assets (Nordern & Weber, 2010; Amidu & Wolfe, 2012).

Other sources of funding are non-deposit funds and wholesale funds which include notes, debentures, short-term bills, brokered deposits, commercial papers and other short-term deposits whose price and supply rapidly change with market conditions. These funding sources are generally short-term in nature and are relatively more expensive than customer deposits. They are measured as "other debts" over total assets (Amidu & Wolfe, 2012). Amidu and Wolfe (2012) further explained that retained earnings and owners'

equity are internal sources of funding and that although they are relatively cheaper than customer deposits and other external loans, they face competing interests as a bank that does not pay out dividends might be unsuccessful in attracting potential stockholders and might also ruin its reputation and market value.

"Funding" in the context of this study refers to the mixture, amounts and characteristics of the various sources of banks' short-term, medium-term and long-term capital. "Mixture" means the various sources of funding such as retail deposits and whole-sale deposits, while "amounts" refer to the quantities or proportions of these funds. "Characteristics" are the qualities that relate to maturity, elasticity and stickiness of the funds.

1.1.2 Financial Performance

There are several measures of a bank's financial performance but the most important ones are those that relate to profitability and liquidity. A bank's profitability is conventionally measured using the following three main financial ratios: return on assets (ROA), return on equity (ROE) and net interest margin (NIM). Liquidity on the other hand has been measured using the following two main ratios: liquid assets to deposit-borrowing ratio (LADST) and net loans to total assets ratio (NLTA).

Return on assets (ROA) is commonly termed as the key financial performance ratio and it relates the income earned by the bank to the assets used in business operations. It is usually defined as the net income (or pre-tax profit) over total assets. Profit before tax is

considered ideal because the calculations using net income after tax figures may show trends due only to changes in the rate of taxation. ROA shows the ability of a bank's management to acquire deposits at a reasonable costs and spend them in profitable investments (Ahmed, 2009). A higher ROA is an indicator that the bank is more profitable.

Return on Equity (ROE) is another measurement of financial performance and is defined as net profit over total equity. ROE is an important indicator of a bank's profitability and growth potential. It is the rate of return to shareholders and therefore mainly important to equity-holders. According to Kamal (2009) a bank's net interest margin (NIM) is a key measure that drives both return on assets (ROA) and return on equity (ROE) ratios. Juan-Ramon et al. (2001), Peters et al. (2004) and other researchers used ROA and ROE as important measures of a bank's profitability. The higher the ROA and ROE, the cheaper the funding sources and the higher the margin that a bank receives.

Net interest margin (NIM) is another measure of financial performance and it measures the difference between the interest income that a bank earns on loans, advances and securities and the interest cost of its borrowed funds. It reflects the cost of a bank's intermediation services and the efficiency of the bank. The higher the NIM, the higher the bank's profit and the more stable the bank is. Therefore, it is one of the key measures of a bank's profitability. However, a higher NIM could be an indicator of riskier lending practices associated with substantial loan loss provisions (Khrawish, 2011).

Liquidity performance on the other hand indicates the ability of a bank to meet its financial obligations in a timely manner. Samad (2004) stated that ‘‘liquidity is the life and blood of a commercial bank’’. CBK (2014) also stated in its Annual Bank Supervision Report that liquidity is one of the important financial stability indicators since its shortfall in one bank can cause a systemic crisis in the banking sector due to their interconnected operations. It adds that liquidity held by commercial banks depicts their ability to fund increases in assets and meet obligations as they fall due. There are several ratios that are commonly used to measure liquidity.

Loans and advances to deposits ratio is used to measure liquidity by dividing the bank’s total loans by its total deposits. It is used to determine the lending practices of a bank. A too high ratio indicates liquidity problems and the bank might not have adequate funds for increased lending or an unanticipated demands by depositors. Loans to total assets ratio relates loans to total assets and it indicates the percentage of total assets that are held as loans. A too high ratio indicates lower liquidity but a low ratio might be an indicator of low profitability. A high proportion of a bank’s assets are held in loans and advances.

Liquid assets to total assets ratio that measures the ability of a bank to meet its short-term obligations such as customer withdrawals and operating costs. The higher the ratio, the better is the liquidity position but this has an opportunity cost since most liquid assets have low returns. The error term (e) will represent other factors that also determine the performance of a mortgage finance institution but which will not be tested by this study. These factors are explained in section 2.3 of the literature review and include capital

adequacy, management efficiency, macroeconomic factors (Athanasoglou et al., 2005) and asset quality (Dang, 2011).

1.1.3 Access to Funds and Financial Performance

A bank can attract loanable funds through retail or wholesale distribution channels or both. Funds from the retail channels are mainly customer deposits and are considered to be relatively cheaper and less elastic to changes in interest rates and hence more reliable than funds from wholesale distribution channels (Thygerson, 1995). Therefore, a bank that generates most of its funds from the retail channels is in a better position to manage its liquidity than the one whose funds are mainly from the wholesale funding channels.

The challenge, however, is that a bank usually faces a dilemma in maintaining a suitable balance between an acceptable level of liquidity and the desired profitability. An attempt to achieve more in any of the two measures of financial performance means sacrificing some of the other performance indicator. Whittlesey (2011) argued that the determination of a bank's portfolio policy requires a balancing act between its cash and income. Michalski (2008) shared the same belief that liquidity management requires that sufficient cash balances and other working capital assets are maintained in a balance. He added that adequate liquidity could contribute to a firm’s fundamental aim of value maximisation. Goodhart (2007) argued that liquidity and insolvency are intertwined and are often indistinguishable. He maintained that an illiquid bank can rapidly become insolvent and an insolvent bank illiquid. Since banks operate with less equity capital than

most non-financial institutions, they are constantly faced with financial leverage and volatility of earnings (MacDonald & Koch, 2006)

1.1.4 Commercial Banks in Kenya

As at 31st December 2014, there were 44 banking institutions in Kenya which were comprised of 43 commercial banks and 1 mortgage finance company (CBK, 2014). All these are supervised and regulated by the CBK. With regards to availability and affordability of credit, the CBK (2014) noted that the expansion of private sector credit in Kenya had been slowed down majorly due to high cost of credit. Kenya Financial Access (2013) established that only 29% of Kenya's adult population had access to credit as compared to more than 64% who had access to savings. The low level of access to credit in Kenya as evidenced by the low number of bank loan accounts at 4.4 million in December 2014 compared to 28.4 million deposit accounts, demonstrates lack of economies of scale in the sector. The costs incurred by banks to mobilise deposits are spread over a small number of borrowers, which contributes to the higher cost of credit.

Various studies on banks' funding in Kenya reveal that the prevailing high cost of credit is attributable to lack of effective competition, high overhead costs, high risk premiums, lack of alternative sources of non-bank funding, shareholders expectations for high profit margins and low financial literacy levels. Lack of access to long-term funding has particularly featured in all annual CBK mortgage market surveys. Although all banks have recently been able to meet the minimum liquidity requirement of 20%, liquidity position of the banking sector has been declining. CBK (2013) reported that the liquidity

of the banking sector declined from 41.9% in 2012 to 38.6% in 2013% and attributed the declining liquidity to increase in lending, which has however been accompanied by declining profit margins.

1.2 Research Problem

Commercial banks provide long-term financing for mortgage loans, project finance and other infrastructural facilities that are long-term in nature. They also provide short-term financing for working capital, salary advances and overdrafts. Commercial banks therefore need to access reliable and affordable funds to match short-term assets with short-term liabilities and long-term assets with long-term liabilities. Kama et al. (2013) noted that most of the sources of funds available for long-term lending are short-term customer deposits with less than 365-day tenor. He added that an estimated 90% of deposits are short-term thus constraining attempts to provide property financing, which requires long-term financing.

Several studies that have been done on long-term financing have generally focused on how it contributes to the overall profitability of banks without regards to liquidity, and the factors that are hindering access to long-term financing and its impact on societies. In his study on the impact of mortgage financing on the profitability of microfinance institutions, Wachira (2014) found a positive relationships between the two variables. Ayogu (1995) looked at the sources of banks' loanable funds and noted that social security funds have substantial reserves of long-term savings that could bridge the gap in long-term funding that is needed in the property market. Mutero (1993) however argued

that pension and life funds prefer to invest in construction projects because these have less risky returns than mortgage financing and adds that many building societies in the 1980s that got direct involvement in real estate development collapsed as a result of cash flow problems.

Although all individual commercial banks have lately been able to meet the minimum liquidity requirements, their liquidity positions have been on the decline, with some banks, whose assets are mainly long-term loans, such as Housing Finance, reporting liquidity levels below the industry average (CBK, 2011-2014). The industry profitability has also been on the decline despite reported increase in lending. This study sought to bridge the gap in the existing body of knowledge since none of the existing studies have explained if there is any relationship between funding levels and financial performance. This study intended to answer the question: what are the funding challenges that face the commercial banks in Kenya and how do they impact on the financial performance of financial institutions?

1.3 Research Objective

The objective of the study was to determine the effect of funding on the financial performance of commercial banks in Kenya. .

1.4 Value of the Study

The findings of this study are important to several parties including commercial banks that offer mortgage financing, asset finance, personal loans and other baking products, the Central Bank of Kenya and researchers. The finding are important to commercial banks because they increase understanding how the funding impact on their financial performance. The findings however revealed that funding is not the only determining factor in financial performance and that there are other factors that need to be to be considered as well. They will thus be able to adjust its funding strategies in line with their financial and operational growth plans.

The findings of the study are important to the Central Bank of Kenya in that by understanding how funding impacts on financial performance, the CBK is better placed to formulate and implement policies that not only safeguard banks' liquidity but also improve banks' financial performance.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter will review the relevant literature relating to the funding of commercial banks. It will start with a review of the theoretical literature, then empirical literature and finally draw a conclusion based on the reviews.

2.2 Theoretical Review

This section will review theoretical literature relating to commercial bank funding which are basically the four main theories of capital structure. These are the Modigliani-Miller theory, the trade-off theory, the pecking order theory and the market timing theory.

2.2.1 Modigliani-Miller theory

Franco Modigliani and Merton Miller (MM) were the pioneers in presentation of a formal model on capital structure. In their seminal papers of 1958 and 1963, they established that under the assumptions of perfect capital markets, no taxes, 100% dividend payout ratio and a constant cost of debt, the value of a firm is independent of its capital structure. Their work has since been the center stage of extended financial research and their model has been criticized and extended over the years.

Stiglitz (1969) approved the validity of the MM theory under their assumptions saying that the theory formed a starting point for a better understanding of the funding function of a business. Smith (1972) and Krause and Litzenberger (1973) also supported the model but only under the assumptions of risk free debt and costless bankruptcy.

Macdonald and Koch (2006) argue that since banks operate with less equity than nonfinancial companies, they are faced with increased financial leverage and volatility of earnings. Since earnings affect the value of a firm, Macdonald and Koch (2006) effectively appear to challenge the Modigliani-Miller theory. Durand (1963) also criticized the Modigliani-Miller theory on grounds of its assumptions saying that they were unrealistic and do not exist in modern economies.

2.2.2 Trade-off Theory

The term trade-off theory has been used by different authors to describe a number of related theories where a firm manager evaluates the various costs and benefits of alternative financing plans. The original version of the trade-off theory came from debates over the Modigliani-Miller theory. This theory argues that when corporate income taxes are added to the original MM theory, this creates a benefit for debt that is served to shield earnings from taxes thereby making debt financing superior to equity financing. Helwege and Liang (1996) however find that the possibility of raising external finance is unrelated to the internal funds deficit and that firms that could obtain bank loans often chose to issue equity instead.

2.2.3 Pecking Order Theory

The pecking order theory was first introduced by Donaldson (1961) and it argues that firms show a similar preference for using internal finance over external finance. If internal funds are not enough to finance investment opportunities, firms may or may not acquire external financing and if they do, they will choose amongst the different external sources in such a way as to minimise additional costs of asymmetric information. In Myers and Majluf model (1984), outside investors rationally discount the firm's stock price when managers issue equity instead of riskless debt. To avoid this discount, managers avoid equity whenever possible. Myers and Majluf model states that managers will follow a pecking order of using up internal funds first then using up risky debt and finally resorting to equity.

In the absence of investment opportunities, firms retain profits and build up financial reserves to avoid having to raise external finance in future. The pecking order theory is to some extent similar to the trade-off theory in that firms will do a cost benefit analysis of the various financing options that are available and choose the one that best suits them.

2.2.4 Market Timing Theory

The market timing theory argues that firms time their equity issues by issuing new stock when the stock price is perceived to be overvalued and buy back own shares when there is undervaluation. Consequently, changes in stock prices affect a firm's capital structure. Graham and Harvey (2001) showed that managers try to time the equity market.

The Modigliani-Miller theory opened a body of literature on the basic nature of debt versus equity. In a perfect capital market, the costs of different forms of financing may not vary independently and therefore, there is no gain in choosing amongst them. However, financing clearly maters as a consequence of taxes, information asymmetry and agency costs. The various theories of capital structure differ in their explanations of these factors. Each emphasises on some costs and benefits of alternative financing options. According to the standard trade-off theory, taxes and bankruptcy account for the use of debt while according to the pecking order theory, adverse selection accounts for the use of debt. In the market timing theory, there is no optimal capital structure and so the market timing decisions accumulate over time into the capital structure outcome.

2.3 Determinants of Financial Performance in the Banking Business

Determinants of financial performance are conventionally divided into internal and external factors (Al-Tamimi, 2010). Internal factors are individual bank characteristics that affect performance and are within the bank's control. External factors are the macroeconomic influences that are beyond the control of a bank such as the rate of inflation and exchange rates.

2.3.1 Capital Adequacy

Capital is the amount of equity funds that are available to support the bank's business and acts a buffer against losses (Athanasoglou, Sophocles & Matthaios, 2005). It is a source of liquidity given that most deposits are prone to fluctuations in amounts and pricing. It has also a direct effect on performance because it allows expansion into risky but profitable business opportunities (Sangmi & Nazir, 2010).

2.3.2 Asset Quality

Loans compose the largest proportions of banks' assets and are the main source of income. The quality of loan portfolio determines the bank's profitability in that a good quality of loans is an assurance of future cash flows. The highest risk facing banks are the losses derived from non-performing loans (Dang, 2011). The lower are the non-performing loans, the better the performance of the bank (Sangmi and Nazir, 2010).

2.3.3 Management Efficiency

Operational efficiency in managing operating expenses is one dimension of management quality. The performance of management is often expressed qualitatively through the evaluation of management systems, control systems and quality of staff among others. Management efficiency is reflected in the level of operating expenses and the lower the operating expenses, the higher the management efficiency and the higher the profitability of the bank (Athanasoglou et. al., 2005).

2.3.4 Funding Management

Funding is another factor that determines the level of a bank's performance. According to Dang (2011), an adequate level of liquidity is positively related to profitability. The most common ratios for measuring liquidity according to Dang (2011) are customer deposits to total assets and total loans to customer deposits. Said and Tumin (2011) however find no relationship between liquidity and profitability amongst Chines and Malaysian banks.

2.3.5 External/Macroeconomic Factors

Macroeconomic factors such as the gross domestic product (GDP), inflation rate, interest rate and the political environment also affect banks' profitability. During an economic boom, the demand for credit is high compared to during recession (Athanasoglou et al., 2005). Athanasoglou et al. (2005) added that the relationship between inflation and profitability is debatable, an argument that was also supported by Vong and Chan (2009).

2.4 Empirical Review

Molyneux and Thornton (1992) examined the profitability of the banking sector in different countries. They took 18 European countries' data during 1986-1989 and found a significant positive association between and among return on equity and the level of interest rates, bank concentration and government ownership during their study. Molyneux and Forbes (1995) used pooled data to explain market structure and performance in 18 European countries for the four years period 1986-1989. Their findings concluded that that regulatory policy should be designed at changing market structure in order to increase competition or the quality of bank performance. Increasing

concentration in banking markets should not be restricted by regulatory measures. Demirguc-Kunt and Maksimovic (1998) identified a positive relationship between bank size and profitability. They found that banks with more funds can easily met their minimum capital requirements so that they could have extra funds for giving loans to borrowers and thereby increasing their profits and earning levels. Havrylchyk et al. (2006) found a positive and direct relationship between capital and profits of commercial banks. Their study concluded that a more efficient bank should have higher profits since it is able to maximise on its net interest income.

Miller and Noulas (1997) found a negative relationship between credit risk and profitability. In their study they found that whenever there was a negative relationship between credit risk and profitability, then that signified a greater risk linked with loans, higher the level of loan loss supplies which thereby and created a trouble at the profit-maximising strength of a bank. Demirguc-Kunt and Huizinga (2001) and Bikker and Hu (2002) found a negative relationship between stock market capitalisation and banks' profitability, meaning that equity and bank financing act as substitutes rather than complements.

Research studies on the determinants of bank's interest margin and profitability have been focusing attention on particular countries (Berger, 1995; Barajas et al., 1999; Naceur & Goaied, 2001) and on a group of countries (Abreu and Mendes, 2002; Demerguç-Kunt and Huizingha, 1999). Naceur and Goaied (2001) found out the factors that affected the Tunisian bank's performances during the period 1980-1995. They

determined that the best developing banks were those with greater effort to get better labor and capital productivity, those who had balanced a high level of deposit accounts compared to their assets and those who had been able to strengthen their equity for the banks performance. Chirwa (2003) determined the relationship between market structure and profitability of commercial banks in Malawi by using time series data during 1970 and 1994. He found a long-run relationship between profitability and concentration, capital-asset ratio, loan-asset ratio and demand deposits ratio.

Bank efficiency has come out as a multi-dimensional concept, which has been discussed widely in the literature. The efficiency of financial service firms and the approach being followed by them is largely included in the information condensed in their financial statements. Chen and Yeh (1998) examined the efficiency of 33 banks in Taiwan. Applying the data development analysis approach, they used variables like loan services, portfolio investment, interest income and non-interest income as the output of banks in Taiwan, while the number of staff employed, bank assets, the number of bank branches, operating costs, and deposits were used as the input variables in their studies regarding the Taiwan's banks. Abreu and Mendes (2002) evaluated the determinants of bank's interest margins and profitability for some European countries. They found that well capitalised banks faced lower expected bankruptcy costs and this benefit interpreted into better profitability.

Bashir (2000) analysed the factors of Islamic bank's performance across eight Middle Eastern countries during 1993-1998. Various number of internal and external determinants were used to forecast the profitability and efficiencies. Controlling for macroeconomic environment, financial market situation and taxation, the results showed that higher leverage and large loans to asset ratios lead to higher profitability. He also reported that foreign-owned banks were more profitable that the domestic ones.

There is also evidence that taxation impacts negatively on a bank's profitability. In addition, macroeconomic setting and stock market development put a positive impact on profitability. Ataullah et al. (2004) made a comparative analysis of commercial banks in India and Pakistan during 1988-1998. They found that the efficiency score in loan based model was much higher as compared to the income based model. Both countries banks have needed to improve their efficiency. Burki and Niazi (2006) analyzed the impact of financial reforms on the efficiency of state, private and foreign banks in Pakistan by using data of 40 banks for the period 1991-2000. They found a positive impact of banks size, interest income to earning assets and loans to deposit ratio on estimated efficiency scores.

In many African countries, there exist sources of longer-term capital that could be channeled to housing finance. Merrill (2007) suggests that the creation of a longer term government bonds market for housing and urban infrastructure, and more targeted interventions aimed at mobilising long-term capital from insurance companies and

pension funds that currently have excess liquidity could provide the stability needed for a significant expansion of mortgage finance (Merrill, 2007).

Vlaar (2000) analysed how capital requirements affect the profitability of two banks that compete as duopolists in a market for loans. The results show that higher capital requirements, the higher burden on the inefficient bank. Capital requirements strongly improve the profitability of the efficient bank when the inefficient bank pursues a failed strategy in absence of regulation.

Mailafia (2007) observed that the poor performance of housing finance system could be attributed to low accessibility, underdevelopment of the land tenure system and the inability of financial systems to provide low cost finance. (Adedokun, Akinradewo, Adegoke, & Abiola-Falemu, 2011) evaluate the performance of the National Housing Fund Scheme in terms of housing delivery in Nigeria. The study adopts secondary data and employs the use of percentiles and t-test as well as Pearson Product Moment of Correlation for the purpose of analysis. The result indicate that the Primary Mortgage Institutions (PMIs) are not adequate in number and that there is a wide difference between the amounts the mortgagors actually applied for and the amounts approved. Ijaiya et al. (2012) uses a primary survey approach to obtain data and employs multiple regression analysis. The results show that the credit facility that is provided by the informal microfinance in the study area is used for housing purposes by the respondents.

Bourke (1989) and Lartey (2013) studied the relationship between liquidity and profitability. They analysed time series data using regression analysis techniques to conclude that there is a positive relationship between liquidity and profitability in commercial banking. The two studies took place in different geographical environments and time periods and the strength of the relationships also varied greatly.

Wathi (2013) investigated the sources of finance for real estate development in Kenya. He uses descriptive statistics such as frequencies, means and percentages. The findings indicate that mortgage financing is the most dominant source of financing, with equity and venture capital being the least prevalent. The findings also indicate that there is a significant positive relationship between mortgage financing and real estate development. His study calls for further research on how mortgage financing is impacting on financial performance of banks, studies which are later done by Wachira (2014) and Makori and Member (2015).

Wachira (2014) on his part uses cross-sectional data to study the relationship between mortgage financing and the profitability of microfinance institutions in Kenya. He notes that there is a positive relationship between the two variables. Although his conclusion would generally be assumed to apply to any other financial institution, he does not extend its findings to banks and mortgage finance institutions.

2.5 Summary of the Literature Review

Existing literature shows that a number of studies relating to liquidity and profitability of commercial bank have been done in a variety of contexts such as geographical location, time periods, different methodologies and objectives. In most of these studies, conclusions are inclined towards the indication that more liquid banks are also more profitable. Some studies however do not find any relationships between these variables. These two arguments seem to be conflicting on the exact nature of relationship between funding which is a major determinant of liquidity and profitability. Furthermore, few studies have focused on funding which is not only closely related to liquidity but also an important determinant of liquidity itself.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents the methodology of the study and outlines the sources of data, data collection methods, details of the variables as well as the data analysis techniques.

3.2 Research Design

The objective of this study was to find out the impact of funding on the financial performance of commercial banks in Kenya. The study made use of correlation and regression techniques because these are the best tools for analyzing relationships and predictions among financial and economic variables (Mugenda and Mugenda, 2003). The study involved more than one independent variables and therefore made use of multivariate econometric techniques to establish relationships among variables. Besides finding out if there are any relationships, these techniques also helped to determine the strength and directions of the relationships.

3.3 Population

The population of the study was the 44 commercial banks operating in Kenya. They are licensed by the Central Bank of Kenya to offer banking services in Kenya to both their staff and customers (CBK, 2014). The institutions are listed in Appendix 1.

3.4 Sample

The sample of the study consisted of 43 commercial banks that were in operation during the period 2010 to 2014. Charterhouse Bank Limited did not meet the sampling criteria because it was not in operation during the period that was selected for this study. The period 2010 to 2014 was used because there are adequate data available for analysis.

3.5 Data Collection

The data that were collected and analysed were quantitative in nature and were collected from the website of the Central Bank of Kenya (CBK). These data were contained in the Annual Bank Supervision Reports of 2010 to 2014. The currency used for reporting the data was the Kenya shillings, abbreviated as KES.

The variables that were collected to help in calculating funding ratios were total loans and advances, total deposits, total assets and liquid assets. These were obtained from the banking sector balance sheet that is included in appendix 2. Variables were collected to calculate return on assets (ROA) were profit before tax, and total assets. These were obtained from the statement of comprehensive income in appendix 3 and the banking sector balance sheet in appendix 2 respectively. Data frequency was yearly covering a period of 4 years from 2011 to 2004. The above variables assisted in calculating the following liquidity and profitability ratios: Loans to total assets ratios, loans and advance to deposits ratios, and liquid assets to total assets ratios; these formed the independent variables. The dependent variable was financial performance as measured by return on assets (ROA).

3.6 Data Analysis

Data analysis is the processing of data to make meaningful information (Sounders et al., 2009). Burns and Grove (2003) defined data analysis as a mechanism for reducing and organising data to produce findings that are required for interpretation by the researcher. Microsoft Excel and STATA were used to analyse the data.

The regression model was of the form:

$y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$, Where

y = Dependent variable (profitability as measured by ROA)

α = Regression constant

β_1, β_2, and β_3 = Regression coefficients (change in y for every unit change in X)

X_1 = Loans and Advances /Deposits

X_2 = Loans/Total Assets

X_3 = Liquid Assets/Total Assets

e = Error term

3.7 Measures of Funding

Funding is one of the important financial stability indicators and it depicts the ability of a commercial bank to fund its increases in assets and meet its obligations as they fall due (CBK, 2014). Adequate liquidity has been associated with increased profitability (Dang, 2011). The following measures of funding were employed in the research model:

3.7.1 Loans and Advances to Deposits Ratio

This ratio is used to measure funding by dividing the bank's total loans by its total deposits. It is conventionally used to determine the lending practices of a bank. A too high ratio indicates liquidity problems and the bank might not have adequate funds for increased lending or an unanticipated demands by depositors.

3.7.2 Loans to Total Assets Ratio

This ratio relates loans to total assets and it indicates the percentage of total assets that are held as loans. A too high ratio indicates lower liquidity but a low ratio might be an indicator of low profitability. A high proportion of a bank's assets are held in loans and advances.

3.7.3 Liquid Assets to Total Assets Ratio

This is a key liquidity ratio that measures the ability of a bank to meet its short-term obligations such as customer withdrawals and operating costs. The higher the ratio, the better is the liquidity position but this has an opportunity cost since most liquid assets have low returns. The error term (e) will represent other factors that also determine the performance of a mortgage finance institution but which will not be tested by this study. These factors are explained in section 2.3 of the literature review and include capital adequacy, management efficiency, macroeconomic factors (Athanasoglou et al., 2005) and asset quality (Dang, 2011).

3.8 Return on Assets

Return on Asset (ROA) is a ratio that indicates the profitability of a bank. It is a ratio of income to total asset (Khrawish, 2011). It measures the ability of the bank management to generate income by utilising company assets at their disposal. It shows how efficiently the resources of the bank are used to generate the income. It further indicates the efficiency of the management of a company in generating net income from all the resources of the institution (Khrawish, 2011). Wen (2010) states that a higher ROA shows that the bank is more efficient in using its resources.

3.9 Tests of Significance and Hypothesis

The study made use of the Analysis of Variance (ANOVA) technique to test the hypothesis concerning the relationship between funding challenges and financial performance of mortgage financing institutions. The test was done at a 95% level of confidence and, therefore, a 5% level of significance. The test was a two-tailed test where, the region of rejection is on both sides of the sampling distribution. The regression coefficient of determination was used to test the strength of a cause and effect of the relationship between the dependent variable which is financial performance and the independent variables which are funding challenges.

CHAPTER FOUR

DATA ANAYLYSIS, RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter presents data analysis and the findings of the analysis. The study looked at 43 banking institutions in Kenya out of the 44 banking institutions operating in Kenya. One banking institution did not meet the criteria for inclusion into the sample because it was under statutory management under the period of the study and, as such, it did not publish its operations. The data collected covered a period of 5 years: 2010 to 2014. The data collected were secondary from the Annual Banking Supervision Reports that are published by the Central Bank of Kenya on annual basis. The data were analysed using multiple linier regression technique. Application software that were used were Microsoft Excel and STATA. The chapter concludes with a summary of the analysis of the findings from the study.

4.2 Data Analysis and Interpretation

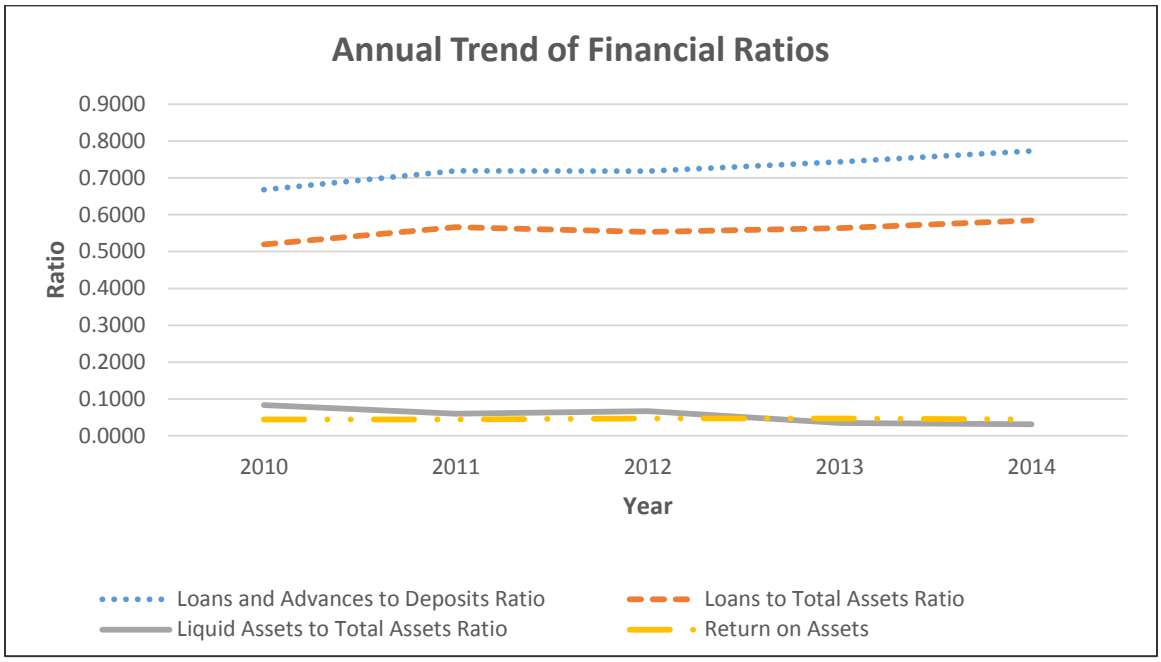
Trend and descriptive analyses were done using Microsoft Excel while regression analysis was done using STATA.

4.2.1 Trend Analysis

The study sought to determine the effect of funding on the financial performance of commercial banks in Kenya. Return on assets was used as a measure financial performance while loans and advances to deposits ratios, loans to total assets ratios and liquid assets to total assets ratios were used to measure funding. These were computed

and compared over the period 2010-2014 and are shown in the appendix 5. The results in appendix 5 were plotted on a graph to reveal the annual trend of the financial rations.

Figure 4.1: Annual Trend of Financial Ratios



Source: Author, 2015

Loans and advances to deposit ratios and loans to total assets ratios depicted a marginal upward trend over the period of the study. This trend was consistent with the general expectation that a bank will normally lend more as it gets more deposits. Return on assets remained fairly stable over the period of the study. This may have been caused by higher costs of funding which increased commercial banks' expenses. At the same time, liquid assets to total assets ratios declined marginally over the period of the study implying that banks might have been facing challenges in meeting day-to-day costs of operations possibly because of increased cost of funds or because of increased cost of operations. In general, the performance indicators used in the study remained fairly stable over the period of the study.

Table 4.1: Descriptive Statistics

Financial Ratios	Minimum	Maximum	Mean	Standard Deviation
Loans and Advances to Deposits Ratio	0.67	0.77	0.72	0.04
Loans to Total Assets Ratio	0.52	0.58	0.56	0.02
Liquid Assets to Total Assets Ratio	0.03	0.08	0.06	0.02
Return on Assets	0.04	0.05	0.05	0.00

Source: Author, 2015.

The mean ROA was 5.0% suggesting that commercial banks have a modest average return on assets. The maximum ROA was 5.0% while the minimum was 4.0%. Subsequently, the standard deviation was significantly small at 0.0% meaning that the variability of returns on assets across the banking industry was very small. It would have been more useful if ROA statistics were compared with those of similar of institution in similar industries.

The descriptive statistics for current ratio indicate a mean of 0.94, a standard deviation of 0.35 and a range of 1.52. This implies that the current ratio for commercial banks vary significantly and this is also reflected in the variation of the return on assets analysed above.

4.2.3 Correlation and Regression Analysis

A multivariate regression model was applied to determine the relationships between financial performance and funding of commercial banks in Kenya. The model used is:

$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$

Where

y = Dependent variable (profitability as measured by ROA)

α = Regression constant

β_1, β_2, and β_3 = Regression coefficients (change in y for every unit change in X)

X_1 = Loans and Advances /Deposits

X_2 = Loans/Total Assets

X_3 = Liquid Assets/Total Assets

e = Error term

Table 4.2: Summary of the Model

Model	R	R^2	Ad R-Square	Root MSE
1	0.4746	0.2252	-2.0992	0.00964

Source: Author, 2015

The root mean squared error measures the fitness of the model and the closer it is to zero the better the fit. In the summary table above, the root mean squared error is 0.00964 which is close to zero and therefore illustrates a good fit of the regression model. R^2 is the coefficient of determination and it tells how return on assets (ROA) varies with changes in loans and advances to deposits ratios, loans to total assets ratios and liquid assets to

total assets ratios. The regression results as shown in the table above indicate that R^2 is 0.2252. This means that 2.25% of financial performance of commercial banks in Kenya is a result of variations in funding as measured by the above three ratios of funding at a confidence level of 95%. This means that 97.75% of financial performance of commercial banks in Kenya are attributable to factors other than funding.

R is the correlation coefficient and it shows the nature of the relationship between financial performance as measured by return on assets and funding as measured by loans and advances to deposits ratios, loans to total assets ratios and liquid assets to total assets ratios. From the results above, R is 0.4746 which indicate a weak but positive relationship between financial performance and funding.

Table 4.3: Analysis of Variance

Source	df	Sum of Squares	Mean of Squares	F(3,1)	Prob>F
Model	3	0.000027025	9.0082e-06	0.10	0.9511
Residual	1	0.000092975	0.000092975		
Total	4	0.00012	0.0003		

Source: Author, 2015

The closer the model sum of squares is to the total sum of squares, the better the model fit. In the above case, the model sum of squares is 0.00002 while the total sum of squares is 0.00012. These are relatively close and therefore implying the model is a good fit.

Table 4.4: Regression Coefficient Results

ROA	Coefficient	Std Error	t	P>|t|	[95% Conf. Interval]	
Liquid Assets / Total Assets	0.0363248	0.4717047	0.08	0.951	-5.957251	0.029901
Loans / Total Assets	-0.2769765	0.5456646	-0.51	0.701	-7.210302	6.656349
Loans and Advances / Deposits	0.2032585	0.4818612	0.42	0.746	-5.919369	0.325886
Constant	0.0488782	0.2302164	0.21	0.867	-2.876298	2.974054

Source: Author, 2015

For each one-point increase in liquid assets to total assets ratio, return on assets increases by 0.0363 points while for each one-point increase in Loans to Total Assets Ratio, return on assets decreases by 0.2769 points. For each one-point increase in Loans and Advances to Deposits Ratio, return on assets increases by 0.2032 points.

The t-values test the hypothesis that the coefficient is different from zero. To reject this, a t-value has to be greater than 1.96 at 0.05 confidence level. The t-values also show the importance of a variable in a model. From the above table, loans to total assets ratio whose t-value is -0.51 is the most important variable in the model. On the hand, loans and advances to deposits ratio has the highest t-value is the least important variable in the model.

Two-tail p-values test the hypothesis that each coefficient is different from zero. To reject this, the p-value has to be lower than 0.05. In the above case, liquid assets to total assets ratio, loans to total assets ratio, and loans and advances to deposits ratio are way above 0.05 and therefore not statistically significant in explaining return on assets.

The estimated model can thus be written as:

ROA = 0.0488782 + 0.0363248 liquid assets to total assets ratio - 0.2769765 loans to total assets ratio + 0.2032585 loans and advances to deposits ratio.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides the summary of findings from chapter four and it also gives the conclusions, limitations and recommendations of the study based on the objectives of the study. The objective of the study was to establish the relationship between financial performance and funding amongst commercial banks in Kenya.

The study used secondary data from the Central Bank of Kenya Annual Supervision Reports for the years 2010 to 2014. The study used return on assets as a measure of financial performance and liquid assets to total assets ratio, loans to total assets ratio, and loans and advances to deposits ratio as measures of funding.

5.2 Summary of Findings

From the data analysis in chapter four, there exists a weak positive relationship between financial performance and funding of commercial banks in Kenya as represented by the positive values of R from the regression analysis. Funding is therefore one of the factors that affect financial performance of commercial banks.

5.3 Conclusion

In conclusion, both the funding and financial performance of commercial banks in Kenya were relatively stable during the period 2010-2014. As reflected by a weak but positive correlation coefficient (R) of 0.4746, there was a weak positive relationship between funding and financial performance of the banks. The findings support Bourke (1989) who found some evidence of a positive relationship between funding and bank profitability for 90 banks in Europe, North America and Australia from 1972 to 1981.

In view of the fact that funding has some amount of bearings on the profitability of a bank, it is important that banks manage their funding very well. When banks hold adequate funding, their profitability is likely to increase. Adequate funding helps the bank minimise liquidity risk and financial crises. The bank can absorb any possible unexpected shock caused by unforeseen need for decrease in liabilities or increase in assets side of the statement of financial position. However, if excess funds are not invested prudently, profitability could diminish because these funding usually come at a cost in terms of interest rates paid on customer deposits. Furthermore, liquid assets usually have no or little interest generating capacity. The opportunity cost of holding low-return assets would eventually outweigh the benefit of any increase in the bank's funding.

5.4 Limitations of the Study

The study faced limitations based on the data that was used. In the Bank Supervision Annual Reports of the CBK, consolidated financial statements were recorded to the nearest one million Kenya shillings. This might have somewhat limited the accuracy of the data used in the study. Besides, the purpose of the study and that of the CBK reports were different. While the section from which the raw data was collected was aimed at reporting financial performance, this report had a different aim. The CBK reports therefore did not provide enough details on funding; perhaps because each bank faces unique and diverse challenges in funding, making it difficult to report the same to the CBK.

The time used to carry out the study was also quite short and presented a challenge in terms of maintaining a suitable balance between work and this study. Limited time made it difficult to read more literature and provide a more detailed analysis of the literature. It also made it difficult to make better use of the University of Nairobi libraries and other resource centers such as the Kenya National Bureau of Statistics offices (KNBS).

The data collected were secondary data from the website of the Central Bank of Kenya. It was therefore rather difficult to verify the accuracy, reliability, completeness, consistency and homogeneity of the data. For example, in the statements of comprehensive income of 2010 to 2012, the Central Bank of Kenya did not include the section on “other comprehensive income” whereas it included that section in the statements of 2013 and 2014.

For the purpose of this study, the model used was quite simplified and might not have captured every important aspect that relates to the funding of a commercial bank. The model did not directly capture the cost of funding which is the interest rates that banks pay on their deposits. Furthermore, the model did not capture the sources of funding – whether retail sources or wholesales source in spite of these having a bearing on the cost of funding.

5.5 Policy Recommendations

There is a positive relationship between the financial performance and funding of commercial banks in Kenya. As a result the study recommends that the banking industry regulator, the Central Bank of Kenya, maintains the regulation over the funding aspect of commercial banks which includes among others maintaining a minimum liquidity ratio of 20%, spreading the customer base to diversity sources of funding and pursuing a good balance between retail funding and wholesale funding.

5.6 Suggestions for Further Research

The data used in the study was secondary and may have provided some limitations with regards to accuracy, adequacy and purpose. To guarantee accuracy of the data, future studies should get secondary data that are not rounded off to Kenya shillings one million. This would mean getting semi-processed data from the Central Bank of Kenya's research offices as opposed to getting the data from their website. This would also help in verifying detail that may not be very clearly in the summarised data.

The University expects masters students to do their research studies within one semester and because this time may not be extended to two or three semesters, it would be prudent for future research students to start doing the research studies early enough to avoid running out of time. A research student may do his or her work in the first or second semester instead of waiting for the third semester. This would save a research from unnecessary panic and unplanned interruptions.

The model used in the study was quite simplified and may not have captured all important aspects that relate a bank's funding activities. Such factors include the interest rates that are paid on customer deposits, the sources of funding, type of instruments used to mobilise funding and the maturity dates of funding. This are certainly important factors that future researchers should take into account while doing their studies.

Future researchers may also carry out comparative studies on similar industries and in different neighbouring counties such as Sudan, Ethiopia, Uganda, Tanzania, Burundi or Rwanda. Similar industries that may be studied include deposit taking microfinance banks, non-deposit taking microfinance banks, savings and cooperative societies, investment financial institution and insurance companies. Such a study would provide a basis for comparison and generalisation as to whether or not the observed results apply to similar industries as well.

Recent developments in the banking industry where banks such as Charterhouse Bank, Dubai Bank Kenya Limited and Imperial Bank have been put under receiverships also point to the need for a case study rather than a census study. Future studies should sample banks that are within the same size and are of the same structure in terms of ownership to see how the results would compare with this study's. Additionally a study on the relationship between the various levels of funding maintained by commercial banks and the level of profitability would provide an insight into how the funding levels affect profitability of commercial banks

REFERENCES

Adedokun, O. A, Akinradewo, F.O., Adegoke, J. O. & Abiola-Falemu, J. O. (2011). *Evaluation of the Performance of National Housing Fund Scheme.*

Al-Tamimi, H. (2010). *Factors Influencing the Performance of the UAE Islamic and Conventional National Banks.* Department of Accounting, Finance and Economics, College of Business Administration, University of Sharjah.

Amidu, M. and Wolfe, S. (2012). 'The Impact of Market Power and Funding Strategy on Bank-Interest Margins', *European Journal of Finance*, vol. 19, no. 9–10, pp. 888–908.

Athanasoglou P.P., Brissimis, S.N. and Delis, M.D. (2005). 'Bank specific, industry specific and macroeconomic determinants of bank profitability', *Journal of international Financial Markets, Institutions and Money*, vol. 18, no. 2, pp. 121–136.

Ayogu, D. (1995). *Structuring a Market Oriented Housing Finance System in Africa.* A Research Report Prepared for Shelter Afrique, Nairobi, with funding from IDRC.

Bourke, P. (1989), Concentration and other Determinants of Bank Profitability in Europe. *Journal of Banking and Finance, pp65-80.*

Central Bank of Kenya. (2010). *Mortgage finance in Kenya: Survey analysis*.

Central Bank of Kenya. (2014). Bank Supervision Annual Reports.

Dang, U. (2011). The Camel Rating System in Banking Supervision. University of Applied Sciences, Journal of *International Business.*

Durand, D. (1963). The Cost of Capital in an Imperfect Market: A reply to M-M. *American Economic Review, 53.*

ECB (2009). EU banks' funding structures and policies, *Banking Supervision Committee.*

Ianotta, G., Nocera, G. and Sironi, A. (2007). 'Ownership Structure, Risk and Performance in the European Banking Industry', *Journal of Banking and Finance*, vol. 31, no.7, pp. 2127–2149.

Khrawish, H. A. (2011). Determinants of Commercial Banks' Performance: Evidence from Jordan. *International Research Journal of Finance and Economics*., 5(5), 19-45.

Lartey, V. C., Antwi, S., and Boadi, E. K., (2013). The Relationship Between Liquidity and Profitability of Listed Banks in Ghana. *International Journal of Business and Social Science* Vol. 4 No. 3; pp. 48-56.

Mailafia, O. (2007). The Place and Prospects of Mortgage Financing in the Economic and Financial Systems Reforms in Nigeria. *Management Sciences* 2 (6): 467-471.

Makori, J. & Memba, F. (2015), Factors Influencing Performance of Mortgage Financing Among Commercial Banks in Kisii Town, Kenya. *International Journal of Economics, Commerce and Management Vol. III, Issue 3.*

Merrill, S. (2007). Mortgage Market Development in Uganda, Zambia and Tanzania, Study prepared for USAID and the U.S. Department of the Treasury, *The Urban Institute, p. 7.*

Mutero, J. (1993). *Overview and Analysis of the Kenyan Housing Finance Sector*. A Report Prepared for USAID/East and Southern Africa.

Olokoyo, F.O. (2011). 'Determinants of Commercial Banks' Lending Behaviour in Nigeria', *International Journal of Financial Research*, vol. 2, no. 2, p. 61.

Said, R.M., & Tumin, M. H. (2010*). Performance and Financial Ratios of Commercial Banks in Malaysia and China.*

Sassen, S. (2008). *Mortgage Capital and its Particularities: A New Frontier for Global.*

Stiglitz, J. E. (1969). A Re-examination of M-M theorem. *American Economic Review, 59, pp. 784-93.*

Stiglitz, J., (1998). *The Role of the Financial System in Development.* Paper presented at the 4th Annual Bank Conference on Development in Latin America and the Caribbean, June 29.

Swank, J. (1996). 'Theories of the Banking Firm: A Review of the Literature', *Bulletin of Economic Research*, vol. 48, no. 3, pp. 173–207.

Todaro, M., & Stephen, S., (2003). *Economic Development*. 8th ed. Addison Wesley.

Tomlinson, M.R. (2007). *A literature Review on Housing Finance Development in Sub-Saharan Africa.* A report commissioned by FinMark Trust.

Vlaar, P. (2000). *Capital Requirements and Competition in the Banking Industry*. De Nederlandsche Bank. Amsterdam, The Netherlands

Vong, A., & Hoi, S. (2009). *Determinants of Bank Profitability in Macao,* (MBA thesis)

Wachira, S. K. (2014). *The Effect of Mortgage Financing on Profitability of Microfinance Institutions in Kenya*. Unpublished MBA Project, University of Nairobi.

Wen, W. (2010). Ownership structure and banking performance: New evidence in China. *Universitat Autònoma de Barcelona Departament D'economia de L'empresa, 2010.*

APPENDICES

Appendix 1: Commercial Banks in Kenya

1	African Banking Corporation Limited
2	Bank of Africa Limited
3	Bank of Baroda Limited
4	Bank of India
5	Barclays Bank of Kenya Limited
6	CfC Stanbic Limited
7	Charterhouse Bank Limited
8	Chase Bank Limited
9	Citibank N.A.
10	Commercial Bank of Africa Limited
11	Consolidated Bank Limited
12	Cooperative Bank of Kenya Limited
13	Credit Bank Limited
14	Development Bank Limited
15	Diamond Trust Bank of Kenya Ltd
16	Dubai Bank Limited
17	Ecobank Limited
18	Equatorial Commercial Bank Limited
19	Equity Bank Limited
20	Family Bank Limited
21	Fidelity Bank Limited
22	First Community Bank Limited
23	Giro Commercial Bank Limited

24	Guarantee Trust Bank
25	Guardian Bank Limited
26	Gulf African Bank Limited
27	Habib Bank A. G. Zurich
28	Habib Bank Limited
29	Housing Finance Company Limited
30	I&M Bank Limited
31	Imperial Bank Limited
32	Jamii Bora Bank Limited
33	Kenya Commercial Bank Limited
34	K-Rep Bank Limited
35	Middle East Bank Limited
36	National Bank of Kenya Limited
37	NIC Bank Limited
38	Oriental Commercial Bank Limited
39	Paramount Universal Bank Limited
40	Prime Bank Limited
41	Standard Chartered Bank Limited
42	Trans-National Bank Limited
43	UBA Bank of Kenya Limited
44	Victoria Commercial Bank Limited

Source: CBK, Bank Supervision Annual Report, 2014

Appendix 2: The Banking Sector Balance Sheet

	The Banking Sector Balance Sheet as at:					
		31/12/2010	31/12/2011	31/12/2012	31/12/2013	31/12/2014
A	**Assets**	**KES. M**	**KES. M**	**KES. M**	**KES. M**	**KES. M**
1	Cash (both local & foreign)	36,384	42,583	49,068	56,735	61,193
2	Balances due from CBK	76,272	92,135	142,961	116,660	170,733
3	GOK and other securities held for dealing purposes	100,896	75,555	104,353	33,112	35,420
4	Financial Assets at fair value through profit and loss	309	301	537	2,056	755
5	Investment securities:	-	-	-	-	-
	a) Held to maturity	-	-	-	-	-
	i) Kenya Government securities	341,649	304,123	411,688	272,947	300,012
	ii) Other securities	-	-	-	3,499	5,535
	b) Available for sale:	-	-	-	-	-
	i) Kenya Government securities	-	-	-	279,293	329,085
	ii) Other securities	10,810	13,033	19,963	11,853	10,272
6	Deposits and balances due from local banks	35,703	57,221	39,437	65,927	72,394
7	Deposits and balances due from banks abroad	29,719	54,585	56,224	74,682	67,118
8	Tax recoverable	334	516	1,103	3,841	2,082
9	Loans and advances to customers (net)	856,854	1,126,788	1,266,158	1,497,171	1,835,780
10	Balances due from banking institutions in the group	41,474	71,458	39,203	44,224	36,778
11	Investment in associates	2,600	3,586	3,401	3,690	5,572
12	Investment in subsidiary companies	17,774	22,068	29,200	37,492	31,580
13	Investment in joint ventures	1,286	1,246	1,246	1,499	-
14	Investment properties	1,117	1,463	616	793	4,839
15	Property and equipment	42,303	47,594	47,548	54,461	50,716
16	Prepaid lease rentals	842	1,032	1,268	1,228	974
17	Intangible assets	14,153	15,684	17,450	17,447	18,570
18	Deferred tax asset	3,516	7,963	8,974	11,219	13,822
19	Retirement benefit asset	1,539	1,479	-	1,837	1,924
20	Other assets	33,254	48,431	49,253	64,974	83,749
21	**Total Assets**	**1,648,788**	**1,988,844**	**2,289,651**	**2,656,640**	**3,138,903**
B	**Liabilities**					
22	Balances due to Central Bank of Kenya	8,656	-	-	8,174	7,232
23	Customer deposits	1,220,603	1,469,494	1,684,866	1,909,072	2,255,888
24	Deposits and balances due to local banks	39,693	53,895	30,729	59,637	54,461
25	Deposits and balances due to foreign banks	22,980	43,500	47,275	44,611	63,559
26	Other money market deposits	2	2	2	266	338
27	Borrowed funds	23,719	50,702	76,288	94,454	147,389
28	Balances due to banking institutions in the group	22,442	27,662	32,481	53,927	57,182
29	Tax payable	4,987	3,315	9,423	2,549	1,068
30	Dividends payable	25	42	48	61	163
31	Deferred tax liability	2,797	662	1,281	759	615
32	Other liabilities	41,066	52,949	49,411	255	142
33	Retirement benefit liability	280	173	809	56,377	55,412
34	**Total Liabilities**	**1,387,250**	**1,702,396**	**1,932,613**	**2,230,142**	**2,643,449**
C	**Shareholders' Funds**					
35	Paid up/assigned capital	62,730	69,225	78,683	87,217	126,789
36	Share premium/(discount)	52,621	53,140	63,349	67,605	77,897
37	Revaluation reserves	8,469	(8,612)	(1,262)	299	2,832
38	Retained earnings /accumulated losses	107,653	132,635	168,219	234,754	252,515
39	Statutory loan reserves	7,476	20,444	22,077	11,752	16,642
40	Other reserves	-	-	-	1,055	509
41	Proposed dividends	19,273	16,283	22,649	21,371	15,832
42	Capital grants	3,315	3,335	3,323	2,443	2,441
43	**Total Shareholders' Funds**	**261,537**	**286,450**	**357,038**	**426,496**	**495,457**
44	Minority interest				-	
45	**Total Liabilities and Shareholders' Funds**	**1,648,787**	**1,988,846**	**2,289,651**	**2,656,638**	**3,138,906**

Source: Annual Banking Supervision Reports, 2010-2014

Appendix 3: The Banking Sector Statement of Comprehensive Income

	The Banking Sector Statement of Comprehensive Income for the Years:					
		2010	2011	2012	2013	2014
1.0	**Interest income**	**KES. M**	**KES. M**	**KES. M**	**KES. M**	**KES. M**
1.1	Loans and advances	101,784	139,125	212,518	206,503	241,356
1.2	Government securities	33,125	33,035	48,199	56,705	62,294
1.3	Deposits and placements with banking institution	1,548	3,763	6,341	4,839	4,648
1.4	Other interest expenses	1,410	1,424	3,287	2,504	2,491
1.5	**Total interest income**	**137,867**	**177,347**	**270,345**	**270,551**	**310,789**
2.0	**Interest expenses**					
2.1	Customer deposits	29,320	39,169	96,133	70,491	86,230
2.2	Deposits and placements from banking institutions	1,543	5,315	7,046	5,912	7,165
2.3	Other interest expenses	1,827	2,715	4,613	4,502	6,884
2.4	**Total interest expenses**	**32,690**	**47,199**	**107,792**	**80,905**	**100,279**
3.0	**Net interest income/ (loss)**	**105,177**	**130,148**	**162,553**	**189,646**	**210,510**
4.0	**Non-interest income**					
4.1	Fees and commission on loans and advances	12,968	15,743	14,561	19,520	21,381
4.2	Other fees and commissions	25,380	29,835	32,773	33,820	41,316
4.3	Foreign exchange trading and income /(loss)	12,446	19,337	20,925	20,289	20,461
4.4	Dividend income	1,686	447	591	1,309	2,162
4.5	Other income	18,670	9,871	11,768	10,944	15,703
4.6	**Total noninterest income**	**71,150**	**75,233**	**80,618**	**85,882**	**101,023**
	Total income	**209,017**	**252,580**	**350,963**	**356,433**	**411,812**
5.0	**Total operating income**	**176,327**	**205,381**	**243,171**	**275,528**	**311,533**
6.0	**Other operating expenses**					
6.1	Loan loss provision	10,809	9,605	12,114	12,595	16,608
6.2	Staff costs	46,552	51,833	58,864	68,016	74,406
6.3	Directors' emoluments	1,303	1,464	1,674	2,267	2,153
6.4	Rental charges	4,686	5,618	6,467	7,375	8,738
6.5	Depreciation charge on property and equipment	6,809	7,942	9,090	9,186	10,179
6.6	Amortization charges	1,246	1,868	2,872	3,886	4,323
6.7	Other operating expenses	31,209	38,573	45,093	47,654	55,265
6.8	**Total other operating expenses**	**102,614**	**116,903**	**136,174**	**150,979**	**171,672**
	Total expenses	**135,304**	**164,102**	**243,966**	**231,884**	**271,951**
7.0	**Profit/(loss) before tax and exceptional items**	**73,713**	**88,478**	**106,997**	**124,549**	**139,861**
8.0	Exceptional items	(2,752)	(8)	-	828	1,390
9.0	**Profit/(loss) after exceptional items**	**76,465**	**88,486**	**106,997**	**123,721**	**138,471**
10.0	Current tax	20,530	25,714	35,621	38,562	42,996
11.0	Deferred tax	(1,275)	(524)	(2,985)	(2,864)	(3,854)
12.0	**Profit /(loss) after and exceptional items**	**57,210**	**63,296**	**74,361**	**88,023**	**99,329**
13.0	Minority interest				-	-
14.0	**Profit after tax and exceptional items**	**57,210**	**63,296**	**74,361**	**88,023**	**99,329**
15.0	**Other comprehensive income**					
15.1	Losses from translating the statements of foreign operations				(205)	(60)
15.2	Fair value changes in available for sale financial assets				299	1,946
15.3	Revaluation surplus on property, plant and equipment				1,763	279
15.4	Share of other comprehensive income of associates				85	29
15.5	Income tax relating to components of other income				(54)	(100)
16.0	**Other comprehensive income for the year net of tax**	-	-	-	**1,888**	**2,094**
17.0	**Total comprehensive income for the year**	**57,210**	**63,296**	**74,361**	**89,911**	**101,423**

Source: Annual Banking Supervision Reports, 2010-2014

Appendix 4: Performance Indicators

	2010	2011	2012	2013	2014
	KES. M	KES. M	KES. M	KES. M	KES. M
Loans and advances	856,854	1,126,788	1,266,158	1,497,171	1,835,780
Deposits[1]	1,283,278	1,566,891	1,762,872	2,013,586	2,374,246
Total Assets	1,648,788	1,988,844	2,289,651	2,656,640	3,138,903
Liquid Assets[2]	137,589	118,439	153,958	91,903	97,368
Profit Before Tax	73,713	88,478	106,997	124,549	139,861

Source: Author, 2015

Appendix 5: Financial Ratios

Financial Ratios	2010	2011	2012	2013	2014
Loans and Advances to Deposits Ratio	0.6677	0.7191	0.7182	0.7435	0.7732
Loans to Total Assets Ratio	0.5197	0.5666	0.5530	0.5636	0.5848
Liquid Assets to Total Assets Ratio	0.0834	0.0596	0.0672	0.0346	0.0310
Return on Assets	0.0447	0.0445	0.0467	0.0469	0.0446

Source: Author, 2015

[1] **Deposits were calculated as:** customer deposits + deposits and balances due to local banking institutions + deposits and balances due to foreign banking institutions + other money market deposits.

[2] **Liquid assets were calculated as:** cash (both local & foreign) + balances due from CBK + GOK and other securities held for dealing purposes + financial assets at fair value through profit and loss