# EFFECT OF THE KENYA BANKS REFERENCE RATE ON THE PERFORMANCE OF

### COMMERCIAL BANKS IN KENYA

# SUBMITTED BY

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D61/60483/2011

# A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF DEGREE IN MASTER OF BUSINESS ADMINISTRATION OF UNIVERSITY OF NAIROBI

### DECLARATION

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

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This research project has been submitted for examination with my approval as the candidate's university supervisor.

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### DEDICATION

This is a special dedication to my beloved wife Fridah Makena, and my son Maxwell Kariuki. You guys are truly my inspiration and are ultimately a contributor to all my successes in life and I trust that God being our guide we shall live to see more of His goodness in our lives. Thank you for your thoughtfulness, well wishes and continuous prayers. Thank you for your unconditional love.

#### ACKNOWLEDGEMENT

I would like to thank my supervisor, Dr. Duncan Elly Ochieng for making this a meaningful learning process. His guidance and encouragement throughout the process of formulating my ideas was invaluable. His ability to view things pragmatically was critical and priceless to the success of this study for which I'm very grateful. I also owe a great deal to my moderator Dr. Kennedy Okiro for keeping me on track on this project

I give my sincere thanks to my family both immediate and extended, for believing in me and encouraging me to go forward on my quest to attain this degree. I recognize my parents Francis and Margaret, for keeping me in their prayers throughout.

I acknowledge the support of my classmates, colleagues at Root Capital Inc. and friends with whom we were together in this journey. Most importantly, I feel deeply indebted to my colleague Peter Onguka for all the support and encouragement he gave me throughout also not forgetting my supervisor, Fred Kitenge, for allowing me to take some time off for exams and tests during work hours, and agreeing to my requested timing of my leave days.

Finally, may I state that I am solely accountable for any flaws in this contribution to academic endeavour.

#### ABSTRACT

Prior to the introduction of the KBRR, banks in Kenya were using their individual base rates to price their loans. The framework they applied in the determination of the base rates was not transparent. Similarly, some level of asymmetry (irregularity) was observed in the response by banks to reductions or increases in the CBR. Banks tended to raise their lending rates proportionately and contemporaneously with increases in the CBR but tended to respond sluggishly to decreases in the CBR. Consequently, monetary policy signals were transmitted to the banks interest rates in an asymmetric manner. As a result of these issues, The Kenya Banks' Reference Rate (KBRR) was introduced in July 2014 following discussions between commercial and microfinance banks, mortgage finance institutions, Kenya Bankers Association (KBA), Central Bank of Kenya (CBK), and The National Treasury. It is part of their recommendations to explore ways of enhancing the supply of private sector credit and mortgage finance in Kenya. The primary purpose of the KBRR is to ensure that banks are transparent with respect to the cost and pricing of their products. The study sought to determine the effect of KBRR on the financial commercial banks performance in Kenya

A descriptive study design was used with 43 commercial banks as the target population. Secondary data was obtained from CBK supervisory reports and the banks published financial statements. The data covered a period of 3 years from 2013 to 2015. Descriptive approach was used to determine the weights of the variables. Interpretation of data was done using SPSS and MS Excel. Inferential statistics involving use of ANOVA and regression analysis was done. Results from this study were presented using charts and tables.

From the findings the study concluded that there is very little effect of KBRR on performance of commercial banks in Kenya. From the regression analysis, KBRR has insignificant effect on the banks profits hence the study concluded by stating that banks will always charge a higher premium "K" no matter what the base rate (KBBR) is in order to realize the targeted profits. The study further concluded that commercial banks in Kenya are profitable with over 90% of commercial banks having positive financial returns. The researcher recommends that further studies be done on a similar study for a longer time period.

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# LIST OF ABBREVIATIONS

| CBK  | Central Bank of Kenya            |
|------|----------------------------------|
| CRB  | Credit Reference Bureaus         |
| DTM  | Deposit Taking Microfinance      |
| DTM  | Deposit Taking Microfinance      |
| ECCU | Eastern Caribbean Currency Union |
| ES   | Efficiency hypothesizes          |
| GDP  | Gross Domestic Product           |
| K    | Addition premium                 |
| KBA  | Kenya Bankers Association        |
| KBRR | Kenya Banks' Reference Rate      |
| LFT  | Loanable Funds Theory            |
| MFI  | Micro finance institutions       |
| MPC  | Monetary Policy Committee        |
| MPC  | Monetary Policy Committee        |
| MST  | Market Segmentation Theory       |
| NPA  | Non-Performing Assets            |
| ROA  | Return on Asset                  |
| ROE  | Return on Equity                 |
| SCP  | Structure Conduct Performance    |

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#### **CHAPTER ONE**

#### **INTRODUCTION**

#### **1.1 Background of the study**

CBK (2014) defines the Kenya Banks' Reference Rate (KBRR) as the base rate for lending by commercial banks and microfinance banks as well as for pricing mortgage products. The Kenya Banks' Reference Rate (KBRR) was introduced in July 2014 following discussions between commercial and microfinance banks, mortgage finance institutions, Kenya Bankers Association (KBA), Central Bank of Kenya (CBK), and The National Treasury. It is part of their recommendations to explore ways of enhancing the supply of private sector credit and mortgage finance in Kenya. At its inception on 8th July, 2014 the CBK computed and set the KBRR at 9.13 percent. It was reviewed to 8.54 per cent on 14th January, 2015 following a reduction in the 2-month weighted moving average of the 91-day Treasury bill rate. Following the Monetary Policy Committee meeting held on 7<sup>th</sup> July 2015, the Central Bank set KBRR at the current rate of 9.87% from the previous 8.54%

To further enhance transparency the Central Bank publishes comparative data on 'K' for various loan products offered by banks. This facilitates decision making by customers and promote competition in credit pricing. Interest rates are not the same in all banks mostly because the cost of doing business varies from bank to bank and this is reflected in the different lending rates charged by the banks. Cost of doing business can be influenced by a lot of factors which for the bank to remain consistently profitable have to be transferred to the borrower.

#### 1.1.1 Kenya Banks' Reference Rate

Interest is the excess money received or paid on money lent or borrowed. Interest can also be defined as money paid above the principal either on simple system or compounding system. Interest rate is the minimum or maximum deposit/lending rates by the end of the year in apex bank financial statement (Yuqi, 2008 & Ramlall 2009). The banks' lending interest rate at times referred to as interest rate constitute effective base rate (KBRR) and any additional premium (K) above the base rate. This premium is always broken down to enable clients to understand its components. This also allows the Government and the Central Bank to make targeted policy interventions to lower the premium. CBK (2015) illustrates the KBRR is computed as an average of (a) the Central Bank Rate (CBR) and (b) the 2-month weighted moving average of the 91-day Treasury bill rate. The 91-day Treasury bill reflects the floor of risk free assets while CBR reflects the stance of monetary policy. A customer should therefore expect to be charged a lending rate of KBRR + 'K'. The KBRR should be seen as the minimum price for banks to participate in the credit market. The charges may relate to the individual customer's risk profile, the type of loan or the risks associated with the investment. These factors may vary from customer to customer depending on the individual ratings reports from Credit Reference Bureaus (CRBs). It also means that any charges above KBRR must be explained to the customer. Interest rate is the price a borrower pays for the use of money they borrow from a lender/financial institutions or fee paid on borrowed assets. Interest can be thought of as "rent of money". Interest rates are fundamental to a capitalistic society and are normally expressed as a percentage rate over the period of one year (Sayedi, 2013).

Nakaso (2013) avers that a more reliable and robust reference interest rate framework also has many potential benefits in terms of greater financial stability. First, a loss of confidence in reference rates, because they had been shown to be unreliable, could lead to market functioning disruption, especially as some contracts do not have robust fallback arrangements. Second, poorly conceived reference rates could transfer risks, particularly those related to bank funding costs, in inappropriate ways. Similarly, they could transfer pricing errors across financial markets or create greater and unnecessary basis risk. Finally, unreliable reference rates may impair the central bank's ability to respond to financial fragilities in an effective manner.

Section 36 (4) of the Central Bank of Kenya Act stipulates that the Central Bank shall publish the lowest rate of interest it charges on loans to banks and that rate shall be known as the Central Bank Rate (CBR). The level of the CBR is reviewed and announced by the Monetary Policy Committee (MPC) at least every two months and its movements, both in direction and magnitude, signals the monetary policy stance. The CBR is the base for all monetary policy operations in order to enhance clarity and certainty in monetary policy implementation.

It is difficult to prove the direction of the relationship between interest rates and profitability, interest rates instability generally has an effect with financial performance of commercial Banks. High interest rates will lead to increased commercial banks interest income but also lead to low demand for the loans and hence crowding out the increased interest income.

Mbao *et al.* (2014) avers that only a small part of the large drop in lending rate that occurred in 2012 is explained by changes in the variables on banks balance sheets, implying other factors at play.

#### 1.1.2 Financial performance of Commercial banks

Commercial banks main role in an economy is the economic resource allocation. They channel funds from depositors to investors continuously. They can only perform this vital role, if they generate necessary income to cover the operational cost they incur in the due course. In other words for sustainable intermediation function, banks need to be profitable. Beyond the intermediation function, the financial performance of banks has critical implications for economic growth of countries. Good financial performance rewards the shareholders for their investment. This, in turn, encourages additional investment and brings about economic growth. On the other hand, poor banking performance can lead to banking failure and crisis which have negative repercussions on the economic growth (Panayiotis et al., 2006).

Profit is the ultimate goal of commercial banks. All the strategies designed and activities performed thereof are meant to realize this grand objective. However, this does not mean that commercial banks have no other goals. Commercial banks could also have additional social and economic goals. The profitability of banks is measured by internal and external factors. The former is bank specific (controllable) and the latter is industrial/macroeconomic (uncontrollable) factors (Sayedi 2014). The performance of commercial banks can be affected by internal and external factors

(Al-Tamimi & Hassan, 2010). These factors can be classified into bank specific (internal) and macroeconomic variables. The internal factors are individual bank characteristics which affect the bank's performance. These factors are basically influenced by the internal decisions of management and board. The external factors are sector wide or country wide factors which are beyond the control of the company and affect the profitability of banks. Studies show that performance of firms cans also be influenced by ownership identity (Ongore, 2013).

Financial performance on the other hand is a measure of the change in financial state of an organization or the financial outcomes that results from management decisions and the execution of those decisions by members of the organization. Its outcomes are not universal in nature but largely depend on the organizational context hence selection of the measures that represent performance of a particular organization is done based upon the circumstances of the organization being rated. Financial performance is commonly measured by ratios such as return on equity, return on assets, return on capital, return on sales and operating margin (Gilchris, 2013)

Financial performance is defined as subjective measure of how well a firm can use assets from its primary mode of business and generate revenues (Waweru & Kalani, 2009). This term is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. There are many different ways of measuring financial performance, but all measures are taken in aggregation. Line items such as revenue from operations, operating income or cash flow from operations can be used, as well as total unit sales can be used in measuring the financial performance.

To measure the profitability of Deposit Taking Microfinance (DTMs) there are variety of ratios used of which Return on Asset, Return on Equity and Net Margin are the major ones (Murthy & Sree, 2003). Financial measures are expressed in monetary units. The techniques widely used for analytical purposes include; ratio analysis, trend analysis and cross sectional analysis. A ratio is a mathematical expression of an amount in terms of another. Chandra (2005) noted that ratio analysis gives an objective picture of a company's financial performance because ratios eliminate the size effect. Two different firms whose sizes differ can be compared.

#### **1.1.3** Effect of interest rates on performance

The effect of interest rate on bank's profits operates via two main channels of the revenues side. First, a rise in interest rate scales up the amount of income a bank earns on new assets it acquires. But, the speed of revenue adjustment will be a function of speed of interest rate adjustment. Second, the effect hinges on the amount of loans and securities held (Were & Wambua, 2013).

Robinson (2001) asserts that the potential impact of interest rates on Commercial Banks financial performance has long been a concern for policy makers and bankers. Banks and to the extension Micro finance institutions earnings are therefore affected by unanticipated changes in interest rates. The exposure of banks profitability and net worth to unanticipated changes in interest rates is what is meant by the term interest rates risk.

Sayedi (2014) presented a model two results indicating that market power has insignificant positive impact on profitability (ROE). Liquidity has significant positive impact on profitability (ROE) while interest rate has insignificant negative impact on profitability (ROE) for banks in Nigeria.

A rise in interest rates is good for Micro finance institutions (MFIs) due to higher returns on new investments, increased profit margins on loans. As a result of this i.e. increase in interest rates which lead to good financial performance of the financial institution sends signal of good returns in the form of dividends. Interest on loans is behind a banks dismal profitability (Njihia, 2005).

Ng'etich & Wanjau (2011) opine that interest rate spread affect the non-performing assets in banks as it increases the cost of loans charged on the borrowers. Mode or type of interest rate charged (whether fixed or float) for they all have different dynamics that might affect the borrower's ability to repay credit loaned. Goldstein & Turner, (1996) also concluded that accumulation of non-performing assets is attributable to high cost of loans

Interest has indirect impact on financial performance through impacting economy, high interest rate to borrowers discourages borrowing this result to reduced investment through multiplier effects savings are reduced and this will have negative impact on banks performance argued by Ngugi (2004). The opposite is true during period of low interest rate. In conclusion interest rate affect financial performance positively and negatively depending on interest rate movement.

#### 1.1.4 Commercial Banks in Kenya

The banking industry in Kenya is regulated by the Central bank of Kenya Act, Banking Act, the companies Act among other guidelines issued by the CBK. Banking industry in Kenya was liberalized back in 1995 and exchange controls revoked. The banks came together under the Kenya Bankers Association (KBA), which works as a lobby for the local banking industry. KBA also serves as a forum to address issues affecting the banking sector. The industry has over the past few years enjoyed exponential growth in deposits, profitability and products offering, mainly attributed to automation of services and branch network expansion both locally and regionally. This growth has brought about increasing competition among the players and new entrants into the banking sector.

Prior to the introduction of the KBRR, banks in Kenya were using their individual base rates to price their loans. The framework they applied in the determination of the base rates was not transparent. Similarly, some level of asymmetry (irregularity) was observed in the response by banks to reductions or increases in the CBR. Banks tended to raise their lending rates proportionately and contemporaneously with increases in the CBR but tended to respond sluggishly to decreases in the CBR. Consequently, monetary policy signals were transmitted to the banks interest rates in an asymmetric manner. The KBRR framework is expected to minimize or eliminate the asymmetric behaviour in the responses by banks to changes in the CBR the institutions will be pricing their loans using the same base rate.

A key ingredient to the successful exploitation of economic opportunities is availability of credit. Credit is indeed the lubricant of the engine of economic growth. Kenya's long term economic blueprint, Vision 2030, has therefore prominently outlined the aspiration for the financial services sector as being to drive high levels of savings for financing Kenya's investment needs. The level of credit to the private sector as a proportion of the Gross Domestic Product (GDP) is used to measure the level of access to credit. Developed countries are characterized with high private sector credit to GDP ratios of more than 100%. National output (GDP) and National income growth are significantly higher for countries with higher credit growth. Kenya's current private sector credit to GDP ratio is 40%, which denotes the prevailing constraints faced by productive economic sectors in accessing funding for exploitation of economic opportunities.

Expansion of private sector credit in Kenya is impeded by the high cost of credit. Kenya's Financial Access (FinAcess) survey of 2013 established that only 29 per cent of Kenya's adult population had access to credit as compared to more than 64 per cent 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 4.1 million in October 2014 as compared to 27.5 million deposit accounts, demonstrates lack of economies of scale in the sector. The costs incurred by banks to mobilize deposits are spread over a smaller number of borrowers, which contributes to the higher cost of credit.

A review of various studies and surveys on cost of credit in Kenya showed that the prevailing high cost of credit is attributed to lack of effective competition, high overhead costs (including wages, infrastructure costs, cash-in-transit, and exorbitant costs involved in the creation, perfection and enforcement of collateral), high risk premiums, lack of alternative sources of nonbank funding, shareholders expectations for high profit margins, and low financial literacy levels.

### **1.2** Research Problem

CBK (2015) illustrates the KBRR is computed as an average of (a) the Central Bank Rate (CBR) and (b) the 2-month weighted moving average of the 91-day Treasury bill rate. Prior to the introduction of the KBRR, banks in Kenya were using their individual base rates to price their loans. The framework they applied in the determination of the base rates was not transparent. Similarly, some level of asymmetry (irregularity) was observed in the response by banks to reductions or increases in the CBR. Banks tended to raise their lending rates proportionately and contemporaneously with increases in the CBR but tended to respond sluggishly to decreases in the CBR.

Financial performance of Commercial Banks in Kenya vary according to the size of the bank in terms of the client base and the asset base. Banks with the highest asset base tend to perform well as they are able to diversify their investments and have the financial strength to survive unafvourable market conditions unlike small banks. Big banks are also able to raise cheap sources of capital hence able to offer low interest to borrowers hence the interest income in their balance sheet is high compared to small banks.

The performance of commercial banks can be affected by internal and external factors (Al-Tamimi & Hassan, 2010). These factors can be classified into bank specific (internal) and macroeconomic variables. The internal factors are individual bank characteristics which affect the bank's performance. These factors are basically influenced by the internal decisions of management and board. A decision on how much "K" to charge is an internal factor. Nakaso (2013) avers that a more reliable and robust reference interest rate framework also has many potential benefits in terms of greater financial stability. Yuqi (2008) examined the determinants of 123 United Kingdom (UK) banks profitability and its implication on risk management from 1999 to 2006. The econometric results indicate that capital adequacy has significant positive impacts on profitability but inflation has insignificant positive impact on profitability. None these studies have investigated the effect of KBRR on bank profitability.

As Mbao *et al.* (2014) avers that only a small part of the large drop in lending rate that occurred in 2012 is explained by changes in the variables on banks balance sheets, implying other factors at play. The variables among others is interest rates charged by banks. The effect of interest rate on banks profit operates via two main channels of the revenues side. First, a rise in the interest rate scales up the amount of income a bank earns on new assets it acquires. But the speed of revenue adjustment will be a function of speed of interest rate adjustment. Second, the effect hinges on the amount of loans and securities held(Were & Wambua, 2013)

The above related studies have focused on effect of interest rates (CBR+bank's interest) on financial performance. Analysis on the effect of KBRR on the financial performance of commercial banks in Kenya has not been done.

#### **1.3** Objective of the study

To determine the effect of the Kenya Banks Reference Rate (KBRR) on the financial performance of Commercial Banks in Kenya

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#### **1.4** Value of the study

Related literature clearly shows that studies focusing on Kenya's financial sector and specifically of KBRR are still scanty and limited. Even those which have been carried out point to a need for further investigation of the factors which have continued to cause poor financial performance in the country, notwithstanding the reforms. Most of the evidence in regard to commercial banks' performance largely focus on the developed economies environments and the conclusions may not be useful for Kenya's financial sector planning. Therefore the study is important to various stakeholders with interest in Kenya's economy including the government, citizens, the banks, foreign investors and academicians.

To the government and macroeconomic policy makers, the study is significant to them since they now understand the relationship between the effects of interest rates on bank performances. They have more knowledge and hence should come up with better policies to ensure banks financial performance is restored so as to boost economic growth. The Kenyan citizens stand to benefit from the implementation of the study findings and due to improved access to financial services and favorable interest rates environment. This will lead to improved lifestyles, high employment and increased households' incomes. To the banks and foreign investors, they now have information to be able to plan and determine the most appropriate time to make investments in financial sector based on the prevailing interest rates. To academicians, the study has added to the existing body of knowledge on bank performance and form a basis for further research.

#### **CHAPTER TWO**

#### LITERATURE REVIEW

#### **2.1 Introduction**

The following section reviews empirical studies and theories that are related to lending interest rates of commercial banks and their financial performance.

#### **2.2 Theoretical Review**

This section describes the theoretical frameworks as supported by different authorities on lending interest rates.

#### 2.2.1 Market Segmentation theory

This theory was espoused by (Culbertson 1957) who assert that long term and short term security markets are independent and there is no causal relationship. Supply and demand forces in different maturity segments of market determine rate for that particular segment.

Kinyura (2011) found out that market segmentation theory is based on institutional practices being followed by commercial banks, microfinance institutions, insurance companies, and investment trusts. The market segmentation theory according to him overlooks the fact that there is an overlap between the markets. In Kenya most banks target MSMEs, in their target customer profile. The loans are given for varying maturity periods as well as prices in terms borrowing interest rates. Banks also consider geographical location of the borrowers and settings- urban or rural. (Johnson, Zuber, & John, 2011)Market Segmentation Theory (MST) is based on fundamental supply and demand factors, the de-emphasis of MST as a term structure explanation means that such important factors as economic conditions and monetary and fiscal policy, as well as the interrelation between different debt market segments and sectors, are not being fully examined in many financial market texts. This paper presents the MST in terms of a basic supply and demand model. This model, in turn, can be used to explain how important economic forces influence the term structure of interest rates and also as a foundation for explaining the other three term.

#### 2.2.2 Loanable funds theory

The loanable-funds theory (Wicksell, 1898)of r is an extension of the classical savings and investment theory of r. It incorporates monetary factors with the non-monetary factors of savings and investment. According to the loanable-funds theory, the rate of interest is determined by the demand for and the supply of funds in the economy at that level at which the two (demand and supply) are equated. Thus, it is a standard demand-supply theory as applied to the market for loanable funds (credit), treating the rate of interest as the price (per unit time) of such funds.

By contrast, the loanable funds doctrine does not equate savings and investment, both understood in an ex ante sense, but integrates bank credit creation into this equilibrium condition. According to (Ohlin, 1937) "There is a credit market but there is no such market for savings and no price of savings". An extension of bank credit reduces the interest rate in the same way as an increase in savings.

Bertocco (2014) avers that the fundamental difference between Keynes and Wicksell and in general the supporters of the LFT (Loanable Funds Theory) lies in the specification of the

consequences of the presence of bank money. Introducing the distinction between the natural rate of interest and interest rate on money, Wicksell and the LFT supporters state that an economy that uses bank money converges towards the equilibrium position that characterizes an economy without banks, in which there is no credit market, but just a capital market where the resources not consumed by savers are exchanged. The presence of bank money does not alter the structure of the economic system; the only element that distinguishes a pure credit economy is the presence of an adjustment mechanism that drives the rate of interest on money, determined within the credit market, towards the natural rate of interest. The working of a pure credit economy can therefore be described using a theory that applies to a world without banks.

#### 2.2.3 The classical theory of interest

Classical theory is determined by the intersection of the investment demand-schedule and the saving schedule- schedule disclosing the relation of investment and saving to the rate of interest. No solution however is possible because the position of the saving schedule will vary with the level of income. As income rises, the schedule will vary with the level of income. As income rises, the schedule will vary with the level of income. As income rises, the schedule will vary with the rate of interest will be unless we already know the income level. And we cannot know the income levels without already knowing the rate of interest, since a lower interest rate will mean a larger volume of the investment, and so, via the multiplier, a higher level of real income, the classical analysis, therefore offers no solution

In classical theory, the interest rate is determined by savings and investment alone, Changes in the quantity of money do not affect the interest rate but only influence the price level (quantity theory of money).

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According to Keynes, true classical theory of interest rate is the savings investment theory. Basically, the theory holds the proposition based on the general equilibrium theory that the rate of interest is determined by the intersection of the demand for and supply of capital. (Caplan, 2000)argued that an equilibrium rate of interest is determined at a point at which the demand for capital equals its supply.

Demand for capital stems from investment decisions of the entrepreneur class. Investment demand schedule, thus, reflects the demand for capital, while the supply of capital results from savings in the community. Savings schedule, thus, represents the supply of capital. It follows that savings and investment are the two real factors determining the rate of interest (Friedman & Kuttner, 1991).

The implication of the theory, different banks have different liquidate, if what stated in the theory is true high liquid bank should charge low interest rate on funds lend in order to attract more borrowers and interest rate on savings should be low in order to discourage savings or if it charges the same rate as other banks on money borrowed then interest rate on saving should remain very low. If that is true interest rate spread on highly liquid banks should be comparatively more than low liquid banks. Financial performance on comparatively high liquid bank should be better than low liquid bank (Rochon & Vernengo, 2001)

#### 2.3 Determinants of Performance of Commercial banks

Guru *et al.* (1997)avers that the determinants of commercial bank profitability can be divided into two main categories namely those that are management controllable and those that are beyond the control of management. Those factors, which are management controllable, are classified as internal determinants and those beyond the control of management are referred to as external determinants. The internal determinants basically reflect on the difference in bank management policies and decisions in regards to sources and uses of funds management, capital and liquidity management and expenses management. The management induced efforts on profitability can be analyzed by examining the balance sheet and profit and loss accounts of these institutions. The balance sheet items would illustrate the banks' management policies and decisions in relation to the sources, composition and uses of funds.

(Giradone, 2008)China's banking system has undergone gradual reform since 1978, with a view to improving efficiency and resource allocation. Recent reforms have focused on allowing banks to list some shares on domestic and foreign exchanges, greater foreign equity participation in Chinese banks, and the establishment of new rural financial institutions. To assess whether these objectives have been achieved, this study looks at how well different types of Chinese banks have performed between 1999 and 2006, and tests for the factors influencing performance. It also evaluates four measures of performance to identify which one, if any, is superior. The independent variables include the standard financial ratios, those which reflect more recent reforms (listing, bank type, the extent of foreign ownership) and macroeconomic variables. The results suggest economic value added and the net interest margin do better than the more conventional measures of profitability, namely ROAE and ROAA. Some macroeconomic

variables and financial ratios are significant with the expected signs. Though the type of bank is influential, bank size is not. Neither the percentage of foreign ownership nor bank listings has a discernable effect.

Nsambu (2014)The study seeks to establish the underlying factors responsible for performance of domestic commercial banks in Uganda. The factors are analyzed in the light of structure– conduct performance (SCP) and Efficiency hypothesizes (ES). This is supplemented by Global advantage theory together with Home field theory.

The study analyses performance of all licensed domestic and foreign commercial banks independently on average basis. Using Linear multiple regression analysis over the period 2000-2011, the study found that, management efficiency; asset quality; interest income; capital adequacy and inflation are factors affecting the performance of domestic commercial banks in Uganda over the period 2000-2011. Policy implications emerged for commercial banks' management includes; efficient management; credit risk management; capital adequacy levels; diversification and commercial bank investment. In addition, monetary policy regulations and instruments should not enforce high liquidity and capital adequacy levels. Regulations on non-interest income activities should be put in place to harmonize the impact of diversification on all commercial banks' performance and to avoid exploitation of bank customers.

Tonui*et al.* (2014)conducted a study to establish the relationship between determinants of credit default and financial performance of commercial banks in Kisii County .This study adopted a descriptive survey. The population of interest was 11 Commercial banks in Kisii County from where the study targeted their employees. The banks were chosen considering their entrance to

Kisii town. This population consisted of 168 Bank staff located within Kisii County. The sample size was 53 respondents drawn from the population of 168 staff of the commercial Banks, which is 30% of the population. The study used both secondary data from other sources and primary data collected using questionnaires to carry out the study. The questionnaire included structured and unstructured questions and were administered through drop and pick method. The questionnaires were tried out. The descriptive statistical tools helped the researcher to describe the data and determine the extent used. Analysis was node by use of descriptive statistics. This include frequency distribution, tables, percentages, mean mode, median etc. In addition, statistical techniques were considered. Data analysis used SPSS, percentages, tabulations, means and other central tendencies. Tables were used to summarize and present responses for further analysis and facilitate comparison. The study established that credit evaluation had a positive effect on financial performance of commercial banks. The study established that loan supervision had a positive effect on financial performance of commercial banks. The research revealed that credit approval had a positive effect on financial performance of commercial banks. The study also found credit monitoring plays a positive role on financial performance of commercial banks

#### **2.4 Empirical studies**

Ngugi and Kabubo (1998) carried out a study on financial sector reforms and interest rate liberalization. The objective of the study was to explore the sequencing and actions so far taken in the liberalization process in Kenya. Study also examined the interest rate levels, spreads and determining factors, as an indicator of financial sector response to the reform process using a sample of 20 commercial banks. Data was collected from relevant sources such as central bank and reports from various institutions. The study found that although much had been

accomplished, the financial system was characterized by repression factors including negative real interest rates, inefficiency in financial intermediation and underdeveloped financial markets. Interest rates were more responsive to the policy activities during the period than to the fundamentals. Interest rates were monetary phenomenon with an adjustment speed of 77% to disequilibrium in the monetary sector. The study concluded that there are several loose knots that need to be tightened for the economy to experience significant positive effects of financial liberalization

Grenade (2007) conducted a trend analysis of commercial banks' interest rate spreads in the Eastern Caribbean Currency Union (ECCU) over the period 1993 to 2003. The study exposed two stylized facts. First, spreads have been strong and persistently showing little signs of narrowing and second, foreign owned banks have been operating with larger spreads compared to their indigenous counterparts. This study employs panel data techniques to measure the relevance of micro and macro factors in determining commercial banks' interest rate spreads over the period. The results indicate that the observed spreads can be attributed to the high level of market concentration, high operating costs and non- performing loans and the central bank's regulated savings deposit rate.

Ng'etich & Wanjau (2011) conducted a study to establish the effects of interest rate spread on the level of Non-Performing Assets in commercial banks in Kenya. This study adopted a descriptive research design on a sample of all commercial banks in Kenya operating by 2008 which are 43 in number. The study used questionnaires to collect data from primary data sources and secondary data, collected from Bank Supervision Report, to augment the primary data findings. The study used both quantitative and qualitative techniques in data analysis to the relationship between the interest rate spread and loan non-performance. The data were presented using graphs, table and pie-Charts. The study concludes that interest rate spread affect performing assets in banks as it increases the cost of loans charged on the borrowers, regulations on interest rates have far reaching effects on assets non-performance, for such regulations determine the interest rate spread in banks and also help mitigate moral hazards incidental to NPAs. Credit risk management technique remotely affects the value of a bank's interest rates spread as interest rates are benchmarked against the associated non-performing assets and non-performing assets is attributable to high cost of loans. The study recommends that commercial banks in Kenya should assess their clients and charge interest rates accordingly as ineffective interest rate policy can increase the level of interest rates and consequently NPAs. They apply stringent regulations on interest rates charged by banks so as to regulate their interest rate spread and enhance periodic/regular credit risk monitoring of their loan portfolios to reduce the level of NPAs.

Saidu and Tumin (2011) investigated the performance and financial ratios on samples of four Malaysian and nine Chinese commercial banks from 2001 to 2007. The research made use of panel data and the regression results show that credit, capital and operating ratios have influence on the performance of banks in China which is not true for Malaysia. The study found that liquidity and size of the banks do not influence the performance of the banks in both countries.

Kipngetich (2011) conducted a study in Kenya with the aim of investigating the relationship between interest rates and ROE. Using regression model and financial performance as the independent variable and interest rate as the dependent variable he established that there is a positive relationship between the two variables though the effect of interest rates on profitability is not significant in the all the financial institutions. In his view all the other factors which influence profitability needs to be enhanced to in order to improve the financial performance of financial institutions in Kenya.

Gilchris (2013) conducted a study in Pakistan with the aim of examining the influence of bank specific and macroeconomic factors on samples of 25 commercial banks profitability from 2007 to 2011. The findings of the study shows that regression results indicated that bank size, net interest margin, and industry production growth rate had positive and significant impact on the profitability (ROA and ROE). Non- performing loan to total advances and inflation have negative and significant impact on ROA while GDP has positive impact on ROA. Capital ratio has positive significant impact on ROE.

Onyekachi and Okoye (2013) examined the impact of bank lending rate on the performance of Nigerian Deposit Money Banks between 2000 and 2010. It specifically determined the effects of lending rate and monetary policy rate on the performance of Nigerian Deposit Money Banks and analyzed how bank lending rate policy affects the performance of Nigerian deposit money banks. The study utilized secondary data econometrics in a regression, where time-series and quantitative design were combined and estimated. The result confirmed that the lending rate and monetary policy rate has significant and positive effects on the performance of Nigerian deposit money banks.

Ongore (2013) conducted a study on Determinants of Financial Performance of Commercial Banks in Kenya. This study utilized CAMEL approach to check up the financial health of commercial banks, the authors used linear multiple regression model and Generalized Least Square on panel data to estimate the parameters. The findings showed that bank specific factors significantly affect the performance of commercial banks in Kenya, except for liquidity variable. But the overall effect of macroeconomic variables was inconclusive at 5% significance level. The moderating role of ownership identity on the financial performance of commercial banks was insignificant. Thus, it can be concluded that the financial performance of commercial banks in Kenya is driven mainly by board and management decisions, while macroeconomic factors have insignificant contribution.

#### 2.5 Summary

Most studies conducted in relation to bank performances have focused on sector-specific factors that affect the overall banking sector performances or determinant of bank performance with no study focusing on KBRR and commercial banks financial performance. None of these studies have examined the effect of KBRR on commercial banks financial performance, yet KBRR Has been operational for the last one year there is the need to determine how they affect commercial banks performance.

The empirical review above indicates that macroeconomics indicators are critical factors that determined the performance of commercial banks in their financial intermediary role of lending. Most studies on this subject were done in different regions, on different macroeconomic indicators and sectors with scanty studies done in developing countries and particularly in Kenya specifically on interest rates. There is therefore a gap in literature regarding the effect of KBRR on commercial banks performance in Kenya. This study seeks to bridge this gap.

#### **CHAPTER THREE**

#### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter describes the research methodology that was employed in the study. It comprises the research methodology, design, target population, data collection techniques, source of data, selection procedures and data analysis. This section aims at establishing the process and means for which the data was collected and presented.

#### 3.2 Research design

The research employed descriptive research design. Descriptive research design method helps in gathering information about the existing status of the phenomena in order to describe what exists in respect to variables. This method was used because it addresses the objective of the study in investigating the relationship between KBRR and profitability (Kothari, 2008). The design takes into consideration aspects like the size of sample in relation to the target population, the variables under the study, the approaches to the research, and the methods employed in data collection. Correlation method was used to determine the relationship between interest rates and profitability of commercial banks. The study used time series empirical data on the variables to examine the relationship between interest rate by establishing correlation coefficients between the variables and profitability of commercial banks as published in the bank's balance sheet.

#### **3.3 Population of the Study**

A population is defined as an entire group of individual or objects having common observable characteristic. It refers to the entire group of people, items or things of interest that the researcher wishes to investigate and from which the sample will be drawn and studied. It is generally a large collection of individuals or objects that is the main focus of a scientific query. It is for the benefit of the population that researches are done. However, due to the large sizes of populations, researchers often cannot test every individual in the population because it is too expensive and time-consuming (Mugenda & Mugenda, 2008).

The target population for this study will be all Commercial Banks in Kenya. The 44 commercial banks will constitute the study population (CBK, 2015). According to Central Bank of Kenya 31 are locally owned while 13 are foreign owned. The study will be carried out between the months of October and November 2015.

#### **3.4 Sample and Sampling Techniques**

The sampling frame describes the list of all population units from which the sample is selected (Cooper & Schinder, 2008). It is a physical representation of the target population and comprises all the units that are potential members of a sample (Kothari, 2008). All the 44 banks constituted the study sample. A census design was applied where all the 44 commercial banks were studied. A census is a collection of information from all units in the population or a complete enumeration of the population. A census design is used where the population is small and manageable (Mugenda & Mugenda, 2003).

#### 3.5 Data Collection

Data collection refers to the means by which information is obtained from the selected subjects of an investigation or a study. It refers to the techniques applied in extracting the required study data for analysis (Mugenda & Mugenda, 2008). The data required for the study will be obtained

from secondary sources that will be used to investigate the relationship between dependent and independent variables. In the study, twelve months data (2014 to 2015) will be collected. The secondary data sources will include Central Bank of Kenya websites and commercial banks financial statements. The collected data will relate to dependent variable which is the commercial banks profitability as reflected in the bank's quarterly financial reports and the independent variables which included KBRR which will be the same for all banks since it is fixed by the CBK, "K" will be obtained from central bank but its value is determined by the commercial banks depending on the risk aversion of the customer and Interest rate which is the cost of borrowing will be collected as charged by commercial banks.

#### **3.6 Data Analysis**

Data analysis is the process of inspecting, cleaning, transforming, and modelling data with the goal of discovering useful information, suggesting conclusions, and supporting decision making. Data analysis has multiple facets and approaches, encompassing diverse techniques under a variety of names, in different business, science, and social science domains (Kothari, 2008). The study will use quantitative method to determine the relationship from the data obtained.

Descriptive statistics will be used to summarize the data. Descriptive studies are usually the best methods for collecting information that will demonstrate relationships and describe the world as it exists. Bickman & Rog (1998) suggest that descriptive studies can answer questions such as "what is" or "what was." Data analysis will use (SPSS) version 21 to generate percentages, tabulations and mean as a measure of central tendency. On analyzing the effect of the independent variables on demand for credit, the study will use correlation and regression analysis. Multiple regressions will be used to determine the relationship between profitability and various interest rates.

### 3.6.1 Conceptual Model

This model of analysis examines the simultaneous effects of the independent variables on a dependent variable. The following function shows the mathematical relationship between the dependent and independent variable.

P = f(KBRR, "K" and CBR)

| Р   | = P                              | Profitability is a measure of commercial bank financial performance |                                                                      |  |  |  |  |  |  |  |  |
|-----|----------------------------------|---------------------------------------------------------------------|----------------------------------------------------------------------|--|--|--|--|--|--|--|--|
| K   | = I1                             | Interest paid to the commercial banks by borrowers                  |                                                                      |  |  |  |  |  |  |  |  |
| CBR | R = C                            | Central Bank Rate                                                   |                                                                      |  |  |  |  |  |  |  |  |
|     | <i>Y</i> =                       | α+                                                                  | $\beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon \qquad (3.1)$ |  |  |  |  |  |  |  |  |
|     | α                                | =                                                                   | Unique factors in Commercial Bank Performance                        |  |  |  |  |  |  |  |  |
|     | $\beta_{1\ldots\ldots}\beta_{3}$ | =                                                                   | are the loading for variable $X$ on $X_{I} X_3$                      |  |  |  |  |  |  |  |  |
|     | $X_1$                            | =                                                                   | KBRR measured in percentage                                          |  |  |  |  |  |  |  |  |
|     | $X_2$                            | =                                                                   | "K" measured in percentage                                           |  |  |  |  |  |  |  |  |
|     | X <sub>3</sub>                   | =                                                                   | CBR measured in percentage                                           |  |  |  |  |  |  |  |  |
|     | Е                                | =                                                                   | $\varepsilon \sim N(0, \sigma^2)$                                    |  |  |  |  |  |  |  |  |
|     | Y                                | =                                                                   | Commercial Bank performance (Profits) measured in (Ksh.)             |  |  |  |  |  |  |  |  |

#### **3.6.2 Data Validity and Reliability**

Before conducting the main survey, a pretesting was administered to the Family bank of Kenya Nakuru branch selected (Phelan and Wren, 2005). In the pretest the respondents were asked to comment on; general understanding of words employed, wording of scales, format and length of the instrument. The feedback was used to adjust the data collection tool accordingly. The adjusted tool was then administered one week later to judge the level at which the respondents interacted with it. The scores from time one and time two after one week were then correlated in order to evaluate the test for stability over time. The data collected was entered into SPSS where Cronbachs alpha was used to perform the reliability test. For comparison, reliability was acceptable when alpha ( $\alpha$ ) was at 0.8 in case of deviation the tool was redesigned (Tavakol and Dennick, 2011). Ones the pretest was completed it was administered to all the 43 commercial banks data.

Validity refers to how well a test measures what it is purported to measure. The type of validity test to be employed is the construct validity which is used to ensure that the tool will actually measure what it is intended to measure (i.e. the construct), and not other variables. The researcher intends to use a panel of "experts" (individuals with experience in ICT and Commercial banking) to assess validity. The experts will examine the items and decide on specific items to be measured (Colin and Julie, 2006).

#### **CHAPTER FOUR**

#### DATA ANALYSIS, RESULTS AND DISCUSSIONS

### 4.1 Introduction

This chapter is a presentation of results and findings obtained from secondary data, both descriptive and inferential statistics have been employed specifically using regression to establish the effect of KBRR on profitability of Commercial banks in Kenya.

#### 4.2 Descriptive Statistics

This section summarizes the population characteristics between the profits posted by commercial banks in their books and interest charged on their loans. The results show the maximum, minimum, means, standard deviations, and skewness, kurtosis of Income of commercial banks, the K, CBK, Book loan, interest rates and the profits before tax. The findings are shown in Table 4.1 AND Table 4.2.

|                      | Ν         | Minimum   | Maximum   | Mean      | Std.      | Skewness  |               | Kurtosis  |               |
|----------------------|-----------|-----------|-----------|-----------|-----------|-----------|---------------|-----------|---------------|
|                      | Statistic | Statistic | Statistic | Statistic | Statistic | Statistic | Std.<br>Error | Statistic | Std.<br>Error |
| Interest             | 35        | 0.33      | 28.31     | 6.32      | 7.22      | 1.591     | .398          | 2.060     | .778          |
| income in 'B'        |           |           |           |           |           |           |               |           |               |
| Κ                    | 28        | .0068     | .6085     | .0835     | .0713     | 3.716     | .217          | 23.508    | .431          |
| CBK Rate             | 0         | .0850     | .1000     | .0877     | .0058     | 1.638     | .217          | .695      | .431          |
| Loan book<br>in ' B' | 35        | 3.03      | 198.37    | 4.23      | 49.63     | 1.618     | .398          | 2.042     | .778          |
| interest rate        | 35        | 17.0      | 17.0      | 17.000    | .0000     |           |               |           |               |
| Yield Rate           | 35        | 6.14%     | 22.07%    | 15.48%    | 3.49%     | 282       | .398          | .367      | .778          |
| Profit before        | 34        | -0.14     | 18.23     | 3.45      | 4.83      | 1.914     | .403          | 3.320     | .788          |
| Tax in 'B'           |           |           |           |           |           |           |               |           |               |
| Valid N              | 0         |           |           |           |           |           |               |           |               |

Table 4.1: Descriptive Statistics of variables and profitability of Commercial banks before KBRR

(listwise)

Table 4.1 show tests on the difference in means of all variables of profitability model considered. Interest income showed a mean of Kshs 6.32 billion, standard deviation of Kshs 7.22 billion during the period which KBRR had not been introduced. The variable K is determined by individual banks based on various factors which affect the cost of funds. However, the findings show a mean K of .0835 and a standard deviation of .0713 during same period. CBR is determined by the CBK and only varies after some time. It is common to all banks. Study findings show the CBR mean of .0878 and a very small standard deviation. Since KBRR had not been introduced by the Central Bank its mean value of was 0 and no standard deviation. The book loan which indicates the amount given out by banks as loan during this period stood at an average of Kshs 4.23 billion and a standard deviation was .0000. There were banks that made losses hence the profitability ranged from -0.14 billion to Kshs 18.23 billion at an average of Kshs 3.45 billion and a standard deviation.

|                                  | Ν         | Minimum   | Maximum   | Mean      | Std. Deviation | Skewness  |       | Kurtosis  |       |
|----------------------------------|-----------|-----------|-----------|-----------|----------------|-----------|-------|-----------|-------|
|                                  | Statistic | Statistic | Statistic | Statistic | Statistic      | Statistic | Std.  | Statistic | Std.  |
|                                  |           |           |           |           |                |           | Error |           | Error |
| Interest income<br>Amount in 'B' | 34        | .13       | 7.92      | 1.94      | 2.32           | 1.428     | .403  | .922      | .788  |
| Av_Income<br>Amount in 'B'       | 34        | .14       | 10.94     | 2.35      | 2.93           | 1.811     | .403  | 2.767     | .788  |
| Κ                                | 34        | .8600     | .8400     | .0835     | .07134         | -5.831    | .403  | 34.000    | .788  |
| CBK Rate                         | 34        | .0850     | .0900     | .0852     | .0012          | 3.925     | .403  | 14.244    | .788  |
| KBRR                             | 34        | .0000     | .0987     | .0735     | .0337          | -1.686    | .217  | 1.048     | .431  |
| Av_Loan Book<br>Amount in 'B'    | 34        | 3.66      | 252       | 51.13     | 62.12          | 1.724     | .403  | 2.605     | .788  |
| interest rate                    | 34        | 16.00     | 17.00     | 16.97     | .17150         | -5.831    | .403  | 34.000    | .788  |
| Av_Yield                         | 34        | 2.27%     | 5.73%     | 3.68%     | .82%           | .784      | .403  | .983      | .788  |
| Av_Profit before<br>Tax in 'B'   | 34        | 26        | 7.13      | 1.23      | 1.79           | 1.795     | .403  | 2.751     | .788  |
| Valid N<br>(listwise)            | 34        |           |           |           |                |           |       |           |       |

Table 4.2: Descriptive Statistics of variables and profitability of Commercial banks after KBRR

Table 4.2 show tests on the difference in means of all variables of profitability model considered. Interest income showed a mean of Kshs 1.94 billion, standard deviation of Kshs 2.32 billion during the period in which KBRR was in operation. The variable K is determined by individual banks based on various factors however the findings show a mean K of .0835 and a standard deviation of .0713 during same period. CBR is determined by the CBK and only varies after some time as determined by the monetary policy comittee. It is common to all banks. Study findings show the CBR mean of .0852 and a standard deviation of .0012. The value of KBRR which is determined by the Central Bank had a mean value of .0735 and a standard deviation of .0337. The loan book which indicates the amount given out by banks as loan during this period stood at an average of Kshs 51.13 billion and a standard deviation of Kshs 62.12 billion. The mean of interest rates was 16.9706 and standard deviation was .17150. There were banks that made losses hence the profitability ranged from Kshs -.260 billion to Kshs 7.13 billion at an average of Kshs 1.23 billion and a standard deviation of Kshs 1.79 billion.

Figure 1 below shows the variation of commercial banks average interest rate before and after the introduction of KBRR. It can be seen that interest rates were higher before the introduction of KBRR in July 2014. The rates declined from a high of 17.02% in July 2013 to a low of 15.26% in May 2015.



Figure 1: Interest rate before and after introduction of KBRR

Source: Monthly Economic review from CBK



Figure 2: Profitability of commercial banks before the introduction of KBRR

Figure 2 shows profits before tax as posted by commercial banks before the introduction of KBRR. The bank that posted the most was KCB other banks such as Ecobank and Equatorial posted negative profits before introduction of KBRR.



#### Figure 3: Yield of commercial banks before and after the introduction of KBRR

Figure 3 shows the difference in yield rates for commercial banks before and after the introduction of KBRR. From the graph, the yields before the introduction of KBRR is more than the yields after the introduction of KBRR. This is because the interest rates were higher before the introduction of KBRR. Annual Yield = Annual gross income from interest and fees /Average outstanding portfolio during year. High interest rate means the gross income from interest is also high hence leading to higher yields.

### 4.3 Financial Performance of Commercial Banks

Figure 5 shows performance of commercial banks with reference to their profits before introduction of KBRR. There are banks that posted negative profits and the pattern is not related to profits after the introduction of KBRR.



Figure 4: Trends for income, loan book and profits before the introduction of KBRR

Figure 4 show the trend of income, loan book and profits for the commercial banks before the introduction of KBRR. The figure shows that the banks had considerably high values of loan book as compared to the profits and the income. The trend also show that there was more income when more amounts of money was availed as loans as it means more interest revenue is generated.



Figure 5: Trends for income and profits after the introduction of KBRR

Figure 5 shows the trend for income and profits after introduction of KBRR. The figure shows that the trends maintained the same pattern as was before the introduction of KBRR since the only difference is a slight reduction in profits due to the reducing interest rates in the post KBRR era.

### **4.4 Diagnostic Statistics**

| Table 4.3: | Tests of No | ormality  |             |              |           |    |
|------------|-------------|-----------|-------------|--------------|-----------|----|
|            | KBRR        | Kolmog    | gorov-Smiri | Shapiro-Wilk |           |    |
|            |             | Statistic | df          | Sig.         | Statistic | df |
| Av Yield   | 9.1300      | .183      | 34          | .005         | .913      | 34 |

a. Lilliefors Significance Correction

The study sought to determine normality of the data used for analysis. For tests on samples of n = 3 to 2000 use Shapiro Wilks; for those of n > 2000 use Kolmogorov-Smirnov in this case the study used Shapiro Wilks. The data was accepted for normality since significance for the test p > 0.05.

Sig. .011

Multicollinearity refers to the presence of highly intercorrelated predictor variables in regression models, and its effect is to invalidate some of the basic assumptions underlying their mathematical estimation. It is not surprising that it is considered to be one of the most severe problem in multiple regression models and is often referred to by social modelers as the "familiar curse". Collinearity diagnostics measure how much regressors are related to other regressors and how this affects the stability and variance of the regression estimates.

| Table 4.4: Collinearity tests |           |                |
|-------------------------------|-----------|----------------|
|                               | Collinear | ity Statistics |
|                               | Tolerance | VIF            |
| K                             | .805      | 1.243          |
| CBK Rate                      | .959      | 1.042          |
| KBRR                          | .805      | 1.242          |

a. Dependent Variable: Profit before Tax

Table 4.4 shows Collinearity diagnostic test conducted on the VIF values were all less than 3 indicating there was no problem with multicollinearity

# 4.5 Correlation analysis

### Table 4.5:Correlations

| Interest income<br>Amount in<br>'000' | Pearson<br>Correlation<br>Sig. (2-<br>tailed) | 1          |        |       |      |        |      |        |    |
|---------------------------------------|-----------------------------------------------|------------|--------|-------|------|--------|------|--------|----|
|                                       | Ν                                             | 124        |        |       |      |        |      |        |    |
|                                       | Pearson<br>Correlation                        | $.227^{*}$ | 1      |       |      |        |      |        |    |
| Κ                                     | Sig. (2-<br>tailed)                           | .011       |        |       |      |        |      |        |    |
|                                       | N                                             | 124        | 124    |       |      |        |      |        |    |
|                                       | Pearson<br>Correlation                        | 029        | 172    | 1     |      |        |      |        |    |
| CBK Rate                              | Sig. (2-<br>tailed)                           | .746       | .057   |       |      |        |      |        |    |
|                                       | N                                             | 124        | 124    | 124   |      |        |      |        |    |
|                                       | Pearson<br>Correlation                        | .118       | 430**  | .169  | 1    |        |      |        |    |
| KBRR                                  | Sig. (2-<br>tailed)                           | .191       | .000   | .061  |      |        |      |        |    |
|                                       | N                                             | 124        | 124    | 124   | 124  |        |      |        |    |
|                                       | Pearson<br>Correlation                        | .807**     | 062    | .101  | .057 | 1      |      |        |    |
| Loan book                             | Sig. (2-<br>tailed)                           | .000       | .493   | .263  | .529 |        |      |        |    |
|                                       | N                                             | 124        | 124    | 124   | 124  | 124    |      |        |    |
|                                       | Pearson<br>Correlation                        | .313**     | .882** | 102   | .047 | 039    | 1    |        |    |
| Interest Rate                         | Sig. (2-<br>tailed)                           | .000       | .000   | .261  | .606 | .668   |      |        |    |
|                                       | N                                             | 124        | 124    | 124   | 124  | 124    | 124  |        |    |
| Drofit hafara                         | Pearson<br>Correlation                        | .883**     | 065    | 009   | .101 | .866** | 019  | 1      |    |
| Tax                                   | Sig. (2-<br>tailed)                           | .000       | .474   | .923  | .265 | .000   | .833 |        |    |
|                                       | N                                             | 124        | 124    | 124   | 124  | 124    | 124  | 124    |    |
|                                       | Pearson<br>Correlation                        | .934**     | 029    | .000  | .088 | .964** | .056 | .934** | 1  |
| Average Profit                        | Sig. (2-<br>tailed)                           | .000       | .885   | 1.000 | .663 | .000   | .783 | .000   |    |
|                                       | N                                             | 27         | 27     | 27    | 27   | 27     | 27   | 27     | 27 |

\*. Correlation is significant at the 0.05 level (2-tailed). \*\*. Correlation is significant at the 0.01 level (2-tailed).

### 4.6 Regression analysis of Profitability of Commercial banks in Kenya

Table 4.3: Model summary showing profitability as explained by predictor variable KBRR ( $\beta_1 = .093, \rho = .360$ ) is not significant indicating that KBRR has very little effect on Profitability. K ( $\beta_2 = -.030, \rho = .767$ ) is also not significant and has less effect on profitability while CBR ( $\beta_3 = -.030, \rho = .749$ ) has negative coefficient indicating that it contribute less to Profitability of Commercial banks.

| Table 4.6: Reg                        | gression c             | coefficients                      | of the interest rate        | and profits of Co | ommercial bank               | s in Kenya | a    |  |  |
|---------------------------------------|------------------------|-----------------------------------|-----------------------------|-------------------|------------------------------|------------|------|--|--|
|                                       | R<br>.108 <sup>a</sup> | Adjusted<br>R <sup>2</sup><br>013 | Unstandardized Coefficients |                   | Standardized<br>Coefficients | t          | Sig. |  |  |
|                                       |                        |                                   | β                           | Std. Error        | Beta                         |            |      |  |  |
| (Constant)                            |                        |                                   | 2224605.268                 | 3123517.989       |                              | .712       | .478 |  |  |
| KBRR                                  |                        |                                   | 6100199.480                 | 6633238.713       | .093                         | .920       | .360 |  |  |
| Κ                                     |                        |                                   | -930942.620                 | 3136794.256       | 030                          | 297        | .767 |  |  |
| CBK Rate                              |                        |                                   | -11211038.715               | 35010988.962      | 030                          | 320        | .749 |  |  |
| Demondant Variable, Duofit hafara Tay |                        |                                   |                             |                   |                              |            |      |  |  |

a. Dependent Variable: Profit before Tax Source Author (2015)

The coefficient of determination R-squared is small (0.013); therefore about 1.3% of the variation in the Profits posted by banks is explained by the independent variables. The regression equation appears not to be very useful for making prediction since the value is not close to 1. In this case 98.7% of the variation is caused by something else.

#### **CHAPTER FIVE**

#### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### **5.1 Introduction**

This chapter presents the summary of findings, conclusions and recommendations derived from the findings of the study. The chapter also presents the limitations that were encountered in the study with suggestions for further research. It is divided into section 5.2 on summary of the study, section 5.3 on conclusion, section 5.4 on policy recommendation, section 5.5 on limitations of the study and section 5.6 on recommendation for further research.

#### **5.2 Summary of the Findings**

The study sought to determine the effect of KBRR on profits posted by commercial banks in Kenya. The study used a descriptive research design to achieve the research objectives. Multiple regression analysis was used to determine the effect of KBRR on profitability of commercial banks in Kenya. The study used Profitability as the dependent variable while K, KBRR and CBR were the independent variables.

The study found that there was very little effect (1.3%) of KBRR on profitability and thus no significant relationship. CBR and K were found to negatively affect profitability. All the commercial banks do present their financial reports to the stakeholders which show that they set the interest rates around the mean.

The study findings show that the mean deviation of interest rates before introduction of KBRR was 17.000 and standard deviation was .0000. There were banks that made losses hence the profitability ranged from Kshs -.14 billion to Kshs 18.23 billion at an average of Kshs 3.45

billion and a standard deviation of 4.83 billion. This is the era where KBRR had not been introduced.

Study findings show the CBR mean of .0852 and a standard deviation of .0011. The value of KBRR which is determined by the Central Bank had a mean value of .0735 and a standard deviation of .0337. The loan book which indicates the amount of money given out by banks as loan during this period stood at an average of Kshs. 51.13 billion and a standard deviation of Kshs. 62.12 billion. The mean of interest rates was 16.9706 percent and standard deviation was .17150 percent. There were banks that made losses hence the profitability ranged from Kshs. -.26 billion to Kshs 7.13 billion at an average of Kshs. 1.23 billion and a standard deviation of Kshs 1.79 billion. Commercial banks profitability was found to be lower in the period after the introduction of KBRR because the introduction of KBRR forced interest rates to go down meaning interest revenue as went down. Interest revenue being a major component of the banks income, its reduction leads to a lower profitability.

#### **5.3 Conclusions**

The main objective of this study was to determine the effect of KBRR on profits posted by commercial banks in Kenya. From the findings the study concludes that there is very little effect of KBRR on financial performance of commercial banks. From the regression analysis, KBRR has insignificant effect on the banks profit hence the study concludes stating that banks will always charge a higher premium "K" no matter what the KBBR is in order to realize the targeted profits. The study further concludes that commercial banks in Kenya are profitable with over 90% of commercial banks having positive financial returns. Secondly, the CBK is not meeting its

intended objective of introducing KBRR to lower interest rates as borrowing is still expensive and not readily available to the private sector. Since KBRR is just the base rate, commercial banks have the freedom to charge the amount of premium ''K'' they want without violating any law. The relationship between interest rates and profits was found to be linear with most commercial banks recording high profits when the interest rates are also high. However, a trend analysis on the interest rates twelve months before and twelve months after the introduction of KBRR shows that the average monthly interest rates charged by commercial banks went down though not to a level where they can significantly affect the bank's profitability. This is supported by Kipngetich (2011) who noted that there is a positive relationship between interest rate and Return On Equity yet the relationship between interest rate and profitability is not significant in all the financial institutions.

#### **5.4 Recommendations**

The study found that interest rate is the most significant factor influencing financial performance of commercial banks in Kenya. The study therefore recommends that central bank should put in place measures of controlling interest rate charged by the commercial banks. The study recommends that banks should stop charging high and unaffordable interest rates as this discourages borrowing hence limiting capital available to potential inventors. This results in slow growth of capital as capital is the main driver of economic growth.

By allowing commercial banks to offer variable interest rates to the borrowers, The CBK fails in its objective of making loans less expensive and affordable to the citizens. Commercial banks offer low interest rates to attract potential borrowers but once the loan is advanced, they adjust the interest rate upwards meaning what once looked like a cheap loan becomes very expensive. The

CBK should advocate for fixed interest rates where borrowers are given fixed interest rate till they fully repay their loan rather than leave the interest rate open to alterations by commercial banks.

The private sector should be involved more in coming up with policies which would limit the commercial banks in charging very high interest rates. Affordable interest rates would open new opportunities in the private sector as economy would expand as a result of readily available capital. A strong economy often leads to success in the long run hence both the private sector, commercial banks and the government tends to gain.

#### 5.5 Limitations of the study

The study was faced by a number of limitations. Firstly, the main purpose of this study was to determine the effect of KBRR on financial performance of commercial banks in Kenya. Central Bank of Kenya considered some information sensitive and confidential and thus the researcher had to convince them that the purpose of information is for academic research only and may not be used for any other intentions.

Secondly, the study relied on secondary data from the Central Bank of Kenya and published financial statements of the different commercial banks. Both Audited and Un-audited financial statements were used as source of data. Data was used as obtained without any adjustments and the researcher had no means of verifying the validity of the data which was assumed to be accurate for the purpose of this study. The study results are therefore subject to the validity of the data.

Thirdly, the study is country specific as KBRR was introduced by the CBK. As such, the findings of the study cannot be generalized to commercial banks in other countries other than Kenya. Fourthly, the period covered by the study is recent as KBRR was introduced in July 2014 hence the period studied is not long enough to take care of the fluctuations in the variables as well as major events in the banking sector.

#### **5.6** Suggestions for further study

Based on the limitations of the study, findings and experience of the researcher over the research period, the study has numerous areas where further research can be done. First, while interest rate is the main determinant of commercial banks profitability since they trade in money, further research should be done incorporating other determinants of commercial banks profitability and not only interest rates.

There is need for further studies to carry out similar study for a longer time period. A similar study should also be carried out in a different country where the base lending rate is determined by the central bank so that the findings of the study can be generalized. Similar research on the effect of KBRR on financial performance of commercial banks in Kenya incorporating more financial and accounting variables and also taking into account the prevailing macroeconomic situation in the country as opposed to the current study which took into consideration only three interest rate variables.

Lastly, most studies done are to establish the effect of interest rates on the financial performance of commercial banks. New studies should be done to establish the right amount of interest rate that should be charged by commercial banks without exploiting the borrowers and at the same time maintaining the profitability of commercial banks at a sustainable level. In addition, some study can be carried out using data from commercial banks as opposed to data obtained from The Central Bank of Kenya. This will improve the reliability of the financial information.

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# APPENDICES

Annex 1: Average Risk Premiums "K" on loan Product offered by each bank as at 31<sup>st</sup> March 2015



|    | CENTRAL BANK OF KENYA                                                                |       |                       |                             |                         |                                            |                          |                       |                                             |                                |             |                |                       |                            |
|----|--------------------------------------------------------------------------------------|-------|-----------------------|-----------------------------|-------------------------|--------------------------------------------|--------------------------|-----------------------|---------------------------------------------|--------------------------------|-------------|----------------|-----------------------|----------------------------|
|    | Average Risk Premiums "K" on Loan Products Offered by Each Bank as at 31* March 2015 |       |                       |                             |                         |                                            |                          |                       |                                             |                                |             |                |                       |                            |
|    |                                                                                      |       | 1                     | L                           |                         | 2                                          | 3                        | 4                     | 5                                           | 6                              | 7           | 8              | ç                     | )                          |
|    |                                                                                      |       | Consum                | er Loan                     | Busine:<br>Secur<br>Pro | Business Loans<br>Secured with<br>Property |                          |                       | -                                           | -                              |             |                | Corpora               | te Loan                    |
|    | NAME OF INSTITUTION                                                                  | KBRR  | 1-2 years<br>maturity | Over 2<br>years<br>maturity | 1-5 years<br>maturity   | Over 5<br>years<br>maturity                | Asset<br>Finance<br>Loan | Overdraft<br>facility | Personal<br>Residential<br>Mortgage<br>Loan | Commercial<br>Mortgage<br>Loan | SMB<br>Losn | Micro-<br>Ionn | 1-5 years<br>maturity | Over5<br>years<br>maturity |
|    | Commercial Banks &<br>Mortgage Finance Companies                                     |       |                       |                             |                         |                                            |                          |                       |                                             |                                |             |                |                       |                            |
| 1  | African Banking Corporation<br>Ltd                                                   | 8.54% | 3.96%                 | 10.46%                      | -                       | -                                          | 4.46%                    | 7.59%                 | -                                           | -                              | 6.09%       | -              | 8.96%                 | -                          |
| 2  | Bank of Africa Kenya Ltd                                                             | 8.54% | 9.14%                 | 7.65%                       | -                       | -                                          | 11.16%                   |                       | 6.89%                                       | 10.25%                         | 7.15%       | -              | 6.27%                 | -                          |
| 3  | Bank of Baroda                                                                       | 8.54% | -                     | -                           | -                       | -                                          | 8.50%                    | 7.83%                 | 6.50%                                       | 7.58%                          | 8.87%       | -              | -                     | 7.46%                      |
| 4  | Bank of India                                                                        | 8.54% | 3.63%                 | -                           | -                       | -                                          | -                        | 8.46%                 | -                                           | -                              | -           | -              | 4.90%                 | -0.92%                     |
| 5  | Barclays Bank of Kenya Ltd                                                           | 8.54% | 11.32%                | 11.32%                      | -                       | -                                          | 12.87%                   | -                     | 4.77%                                       | -                              | -           | -              | -                     | -                          |
| 6  | CfC Stanbic (K) Ltd                                                                  | 8.54% | 9.87%                 | 7.80%                       | -                       | -                                          | 7.04%                    | -                     | 6.46%                                       | -                              | -           | 13.91%         | 3.93%                 | -                          |
| 7  | Chase Bank Ltd                                                                       | 8.54% | 7.99%                 | 8.81%                       | -                       | -                                          | 7.89%                    | 10.76%                | -                                           | -                              | 10.18%      | -              | 8.81%                 | -0.63%                     |
| 8  | Citibank N.A.                                                                        | 8.54% | -                     | -                           | -                       | -                                          | -                        | -                     | -                                           | -                              | -           | -              | 1.42%                 |                            |
| 9  | Commercial Bank of Africa Ltd                                                        | 8.54% | 7.13%                 | 6.76%                       | -                       | •                                          | 7.01%                    | 6.04%                 | 5.08%                                       | 8.46%                          | 6.27%       |                | 7.03%                 |                            |
| 10 | Consolidated Bank Ltd                                                                | 8.54% | 12.87%                |                             | 10.87%                  | -                                          | 9.77%                    | 11.27%                | 9.87%                                       | -                              | -           | -              | -                     |                            |
| 11 | Co-operative Bank of Kenya<br>Ltd                                                    | 8.54% | -                     | -                           | 11.78%                  | 11.61%                                     | 6.89%                    | 10.80%                | 5.47%                                       | -                              | -           | -              | 5.81%                 | 6.48%                      |
| 12 | Credit Bank Ltd                                                                      | 8.54% | 10.46%                | 8.46%                       | 9.71%                   | -                                          | 10.46%                   | 10.96%                | -                                           | -                              | -           | -              | 9.46%                 | -                          |
| 13 | Development Bank                                                                     | 8.54% | 8.37%                 | -                           | 8.37%                   | -                                          | 8.37%                    | 8.37%                 | 8.37%                                       | -                              | -           | -              | 8.37%                 | 8.37%                      |
| 14 | Diamond Trust Bank Ltd                                                               | •     | •                     | •                           | •                       | •                                          | •                        | •                     | •                                           | •                              | •           | •              | •                     | •                          |
| 15 | Dubai Bank Ltd                                                                       | 8.54% | 4.37%                 | 4.37%                       | 12.12%                  | 12.12%                                     | -                        | 10.75%                | -                                           | -                              | 10.12%      | -              | -                     | -                          |
| 16 | Ecobank Kenya Ltd                                                                    | 8.54% | 11.79%                | 11.03%                      | -                       | -                                          | 12.96%                   | 9.20%                 | -                                           | -                              | 12.23%      | -              | -                     | -                          |
| 17 | Equatorial Commercial Bank<br>Ltd                                                    | 8.54% | 12.96%                | 11.46%                      | -                       | -                                          | 11.96%                   | 6.46%                 | -                                           | -                              | 12.21%      | -              | 11.21%                | 9.21%                      |
| 18 | Equity Bank Ltd                                                                      | 8.54% | 7.96%                 | 7.96%                       | 10.46%                  | 9.46%                                      | 1.46%                    | 10.46%                | 8.46%                                       | 8.46%                          | 8.96%       | 5.46%          | 3.96%                 | 3.96%                      |
| 19 | Family Bank Ltd                                                                      | 8.54% | 6.46%                 | 6.08%                       | -                       | -                                          | 8.17%                    | 8.87%                 | 3.95%                                       | 8.01%                          | 9.22%       | 26.23%         | 6.86%                 | 5.04%                      |
| 20 | Fidelity Commercial Bank Ltd                                                         | 8.54% | 8.46%                 | 8.46%                       | 8.46%                   | -                                          | 8.46%                    | 8.46%                 | -                                           | -                              | 8.46%       | -              | 8.46%                 | -                          |
| 21 | First Community Bank Ltd                                                             | 8.54% | 9.33%                 | 9.33%                       | 12.00%                  | 12.00%                                     | 12.00%                   | -                     | 6.83%                                       | 9.65%                          | 12.15%      | 15.00%         | -                     | -                          |

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|    | CENTRALBANKOFKENYA                                                                  |      |        |       |        |        |       |       |        |        |       |       |        |       |
|----|-------------------------------------------------------------------------------------|------|--------|-------|--------|--------|-------|-------|--------|--------|-------|-------|--------|-------|
|    | AverageRiskPremiums"K"onLoanProductsOfferedbyEachBankasat31 <sup>st</sup> March2015 |      |        |       |        |        |       |       |        |        |       |       |        |       |
|    |                                                                                     |      | 1      | -     | 2      |        | 3     | 4     | 5      | 6      | 7     | 8     | 9      | )     |
|    |                                                                                     |      |        |       | Busin  | lessLo |       |       |        |        |       |       |        |       |
|    |                                                                                     |      |        |       | a      | ns     |       |       |        |        |       |       |        |       |
|    |                                                                                     | WDDD | 1-     | Ove   | 1-     | Over   | Asset | Overd | Person | Comm   | SM    | Mic   | 1-     | Over  |
|    | NAMEOFINSTITUTION/                                                                  | KBKK | 2years | r2    | Syears | 5      | Fina  | raft  |        | ercial | E     | ro-   | Syears | 5     |
| 22 | Giro Commercial BankLtd                                                             | 8.54 | 8.63   | 7.46  | 7.46   | -      | 7.63  | 7.34  | 7.46   | 6.46   | -     | -     | 7.63   | -     |
| 23 | GuarantyTrustBankLtd                                                                | 8.54 | -      | -     | 8.96   | 7.84   | 11.01 | 9.34  | -      | -      | 10.46 | -     | 9.46   | -     |
| 24 | GuardianBankLtd                                                                     | 8.54 | 12.23  | 12.23 | 8.51   | 8.51   | 8.91  | 10.74 | 8.01   | 8.51   | 8.02  | 10.76 | 9.02   | 9.02  |
| 25 | GulfAfricanBankLtd                                                                  | 8.54 | -      | 11.03 | -      | -      | -     | -     | 9.17   | 8.46   | 8.96  | -     | -      | 8.46  |
| 26 | HabibBankAGZurich                                                                   | 8.54 | 7.96   | -     | -      | -      | -     | -     | -      | -      | -     | -     | 6.48   | -     |
| 27 | HabibBankLtd                                                                        | 8.54 | 8.59   | _     | 8.87   | _      | -     | 6.76  | _      | 5.87   | 8.66  | -     | 8.61   | -     |
| 28 | HousingFinance Co.ofKenya                                                           | 8.54 | _      | _     | 10.46  | -      | 9.46  | 10.46 | 8.46   | 9.46   | -     | -     | _      | -     |
| 29 | ImperialBankLtd                                                                     | 8.54 | 12.62  | 6.86  | -      | -      | 8.30  | -     | -      | -      | -     | -     | 9.01   | 8.96  |
| 30 | I&MBankLtd                                                                          | 8.54 | 8.93   | 7.05  | 8.39   | 8.87   |       | 8.69  | 6.18   | -      | -     | -     | 9.09   | 8.73  |
| 31 | JamiiBoraBankLtd                                                                    | 8.54 | 8.87   | 8.87  | 9.87   | 9.87   | 11.87 | 11.87 | 8.87   | 8.87   | 11.87 | 15.87 | 8.87   | 8.87  |
| 32 | Kenya CommercialBankLtd                                                             | 8.54 | 8.17   | 8.17  | 10.17  | 10.17  | 5.31  | 7.17  | 5.62   | 6.92   | 10.17 | -     | 7.17   | 7.17  |
| 33 | K-RepBankLtd                                                                        | 8.54 | 15.87  | 15.87 | 15.87  | -      | 1.37  | 15.87 | -      | -      | 15.87 | 18.92 | 15.87  | -     |
| 34 | MiddleEastBankKenyaLtd                                                              | 8.54 | 10.46  | -     | -      | -      | 8.11  | 8.48  | -      | -      | 9.50  | -     | -      | -     |
| 35 | NationalBankofKenyaLtd                                                              | 8.54 | 10.37  | 6.17  | 7.04   | 8.96   | 9.17  | -     | 5.73   | 7.75   | -     | 7.04  | 7.46   | 3.87  |
| 36 | NICBankLtd                                                                          | 8.54 | 7.89   | 6.84  | -      | -      | 7.58  | 6.54  | 2.41   | 9.87   | 8.26  | -     | 1.63   | -     |
| 37 | OrientalCommercialBankLtd                                                           | 8.54 | -      | -     | 10.08  | -      | 9.67  | 9.92  | -      | -      | -     | -     | -      | -     |
| 38 | ParamountUniversalBankLtd                                                           | 8.54 | 0.96   | -     | 8.96   | 8.96   | -     | 5.46  | -      | -      | 8.96  |       | 8.96   | 8.96  |
| 39 | PrimeBankLtd                                                                        | 8.54 | 9.50   | 8.25  | 7.71   | -      | -     | 8.89  | 8.96   | -      | -     | -     | 8.60   | 8.32  |
| 40 | StandardCharteredBankLtd                                                            | 8.54 | -      | 10.86 | -      | 5.36   | 7.36  | 15.46 | 5.36   | -      | 7.46  | -     | 3.21   | 3.45  |
| 41 | Trans-NationalBankLtd                                                               | 8.54 | 17.77  | 16.96 | 14.75  | 11.21  | 1.46  | 8.71  | -      | -      | 12.59 | 15.46 | 10.59  | 10.59 |
| 42 | UBAKenyaBankLtd                                                                     | 8.54 | 6.21   | _     |        | -      | -     | -     |        |        |       | -     | -      |       |
| 43 | VictoriaCommercialBankLt                                                            | 8.54 | -      | -     | -      | -      | 8.71  | 8.40  | -      | -      | 8.53  | -     | -      | -     |

\*-DiamondTrustBankisyettoconvertloanstoKBRRframework. "-"-Referstoloanproductswhicharenotofferedbytherespectivebanks.

| Annex 2: | Data | collected | from | banks |
|----------|------|-----------|------|-------|
|----------|------|-----------|------|-------|

| Name of the Bank | Period   | Interest income | K    | CBK  | KBRR   | Р           | Interest | Profit B4 Tax | Average     |
|------------------|----------|-----------------|------|------|--------|-------------|----------|---------------|-------------|
|                  |          | Amount in '000' |      | Rate |        |             | Rate     |               | Profit      |
|                  |          |                 |      |      |        |             |          |               |             |
| Bank of Africa   | Mar - 14 | 1,086,162       | 0.14 | 0.09 | 0.0000 | 31,668,452  | 0.14     | 427,756       | 207,006     |
| Kenya            | Dec - 14 | 3,430,020       | 0.26 | 0.09 | 0.0987 | 38,463,876  | 0.36     | 203,666       |             |
|                  | Mar - 14 | 1,195,658       | 0.04 | 0.09 | 0.0854 | 39,455,582  | 0.12     | 135,957       |             |
|                  | Jun - 15 | 1,201,116       | 0.04 | 0.09 | 0.0854 | 38,638,939  | 0.12     | 60,643        |             |
|                  |          |                 |      |      |        |             |          |               |             |
| Bank of India    | Mar - 14 | 309,747         | 0.10 | 0.09 | 0.0000 | 12,207,887  | 0.10     | 226,494       | 390,915     |
|                  | Jun - 14 | 352,943         | 0.02 | 0.09 | 0.0987 | 12,370,425  | 0.11     | 347,824       |             |
|                  | Dec -14  | 674,951         | 0.13 | 0.09 | 0.0854 | 12,375,611  | 0.22     | 709,942       |             |
|                  | Mar -14  | 364,202         | 0.02 | 0.09 | 0.0854 | 13,415,955  | 0.11     | 310,378       |             |
|                  | Jun - 15 | 383,380         | 0.03 | 0.10 | 0.0854 | 13,362,230  | 0.11     | 359,936       |             |
|                  |          |                 |      |      |        |             |          |               |             |
| Barclays bank    | Jun - 14 | 7,918,183       | 0.15 | 0.09 | 0.0987 | 128,446,955 | 0.25     | 6,111,838     | 4,682,210   |
|                  | Dec - 14 | 8,789,015       | 0.19 | 0.09 | 0.0854 | 125,423,371 | 0.28     | 6,181,686     |             |
|                  | Mar – 15 | 4,466,761       | 0.06 | 0.09 | 0.0854 | 125,295,936 | 0.14     | 3,120,627     |             |
|                  | Jun - 15 | 4,381,486       | 0.05 | 0.10 | 0.0854 | 133,554,804 | 0.13     | 3,314,687     |             |
|                  |          |                 |      |      |        |             |          |               |             |
| Chase bank       | Mar - 14 | 2,524,735       | 0.23 | 0.09 | 0.0000 | 43,450,329  | 0.23     | 617,606       | 1080404.6   |
|                  | Jun – 14 | 2,806,099       | 0.14 | 0.09 | 0.0987 | 47,464,497  | 0.24     | 903,036       |             |
|                  | Dec - 15 | 6,296,710       | 0.38 | 0.09 | 0.0854 | 53,821,223  | 0.47     | 1,781,207     |             |
|                  | Mar – 15 | 3,215,463       | 0.14 | 0.09 | 0.0854 | 56,353,950  | 0.23     | 906,096       |             |
|                  | Jun – 15 | 3,407,815       | 0.13 | 0.10 | 0.0854 | 62,636,335  | 0.22     | 1,194,078     |             |
|                  |          |                 |      |      |        |             |          |               |             |
| CFC Stanbic      | Jun – 14 | 4,302,200       | 0.08 | 0.09 | 0.0987 | 97,486,381  | 0.18     | 3,237,497     | 2033353.667 |
|                  | Dec - 14 | 7,340,257       | 0.25 | 0.09 | 0.0854 | 88,347,438  | 0.33     | 1,632,803     |             |
|                  | Jun – 15 | 4,393,121       | 0.06 | 0.10 | 0.0854 | 120,516,613 | 0.15     | 1,229,761     |             |
|                  |          |                 |      |      |        |             |          |               |             |
|                  |          |                 |      |      |        |             |          |               |             |

| Name of the Bank  | Period   | Interest income | K    | CBK  | KBRR   | Р           | Interest | Profit B4 Tax | Average   |
|-------------------|----------|-----------------|------|------|--------|-------------|----------|---------------|-----------|
|                   |          | Amount in '000' |      | Rate |        |             | Rate     |               | Profit    |
| CITIBANK NA       | Mar – 14 | 1,213,437       | 0.16 | 0.09 | 0.0000 | 31,081,862  | 0.16     | 1,025,976     | 1,383,974 |
|                   | Dec - 14 | 1,260,310       | 0.12 | 0.09 | 0.0854 | 24,012,130  | 0.21     | 1,995,833     |           |
|                   | Mar - 15 | 528,983         | 0.01 | 0.09 | 0.0854 | 22,841,417  | 0.09     | 1,290,638     |           |
|                   | Jun – 15 | 552,905         | 0.01 | 0.10 | 0.0854 | 23,180,714  | 0.10     | 1,223,447     |           |
|                   |          |                 |      |      |        |             |          |               |           |
| Consolidated bank | Mar - 14 | 449,910         | 0.17 | 0.09 | 0.0000 | 10,792,881  | 0.17     | 16,069        | (40,537)  |
|                   | Jun – 14 | 400,120         | 0.05 | 0.09 | 0.0987 | 10,536,707  | 0.15     | (27,411)      |           |
|                   | Dec – 14 | 959,137         | 0.33 | 0.09 | 0.0854 | 9,212,581   | 0.42     | (235,848)     |           |
|                   | Mar – 15 | 368,440         | 0.08 | 0.09 | 0.0854 | 8,771,298   | 0.17     | (19,031)      |           |
|                   | Jun – 15 | 379,438         | 0.09 | 0.10 | 0.0854 | 8,798,614   | 0.17     | 63,536        |           |
|                   |          |                 |      |      |        |             |          |               |           |
| КСВ               | Mar - 14 | 7,237,122       | 0.14 | 0.09 | 0.0000 | 204,646,324 | 0.14     | 4,890,323     | 6,829,000 |
|                   | Jun – 14 | 7,652,809       | 0.04 | 0.09 | 0.0987 | 213,663,852 | 0.14     | 5,824,478     |           |
|                   | Dec – 14 | 17,037,609      | 0.19 | 0.09 | 0.0854 | 248,823,710 | 0.27     | 11,646,953    |           |
|                   | Mar – 15 | 8,814,517       | 0.05 | 0.09 | 0.0854 | 262,311,085 | 0.13     | 5,654,273     |           |
|                   | Jun – 15 | 9,729,362       | 0.05 | 0.10 | 0.0854 | 283,200,200 | 0.14     | 6,128,975     |           |
|                   |          |                 |      |      |        |             |          |               |           |
| Cooperative bank  | Mar – 14 | 5,475,008       | 0.14 | 0.09 | 0.0000 | 154,597,026 | 0.14     | 3,291,610     | 3,915,191 |
|                   | Jun – 14 | 5,702,524       | 0.04 | 0.09 | 0.0987 | 165,600,406 | 0.14     | 3,493,692     |           |
|                   | Dec – 14 | 13,492,074      | 0.22 | 0.09 | 0.0854 | 178,978,586 | 0.30     | 4,386,919     |           |
|                   | Mar - 15 | 6,644,802       | 0.06 | 0.09 | 0.0854 | 183,139,637 | 0.15     | 4,238,022     |           |
|                   | Jun – 15 | 6,830,000       | 0.05 | 0.10 | 0.0854 | 203,407,985 | 0.13     | 4,165,711     |           |
|                   |          |                 |      |      |        |             |          |               |           |
| DTB               | Mar – 14 | 2,854,136       | 0.15 | 0.09 | 0.0000 | 78,152,672  | 0.15     | 1,457,847     | 1,950,942 |
|                   | Jun - 14 | 2,857,116       | 0.04 | 0.09 | 0.0987 | 79,886,873  | 0.14     | 1,545,403     |           |
|                   | Dec – 14 | 6,247,211       | 0.18 | 0.09 | 0.0854 | 94,059,260  | 0.27     | 3,303,822     |           |
|                   | Mar- 15  | 3,256,916       | 0.04 | 0.09 | 0.0854 | 100,166,147 | 0.13     | 1,688,666     |           |
|                   | Jun – 15 | 3,547,690       | 0.04 | 0.10 | 0.0854 | 113,242,826 | 0.13     | 1,758,971     |           |
|                   |          |                 |      |      |        |             |          |               |           |
| IMPERIAL          | Mar – 14 | 1,379,314       | 0.18 | 0.09 | 0.0000 | 30,217,695  | 0.18     | 598,325       | 823,330   |
|                   | Jun – 14 | 1,316,031       | 0.07 | 0.09 | 0.0987 | 30,527,447  | 0.17     | 605,742       |           |

| Name of the Bank | Period                                    | Interest income | K    | CBK  | KBRR   | Р           | Interest | Profit B4 Tax | Average                |
|------------------|-------------------------------------------|-----------------|------|------|--------|-------------|----------|---------------|------------------------|
|                  |                                           | Amount in '000' |      | Rate |        |             | Rate     |               | Profit                 |
|                  | Dec – 14                                  | 2,748,392       | 0.27 | 0.09 | 0.0854 | 30,997,838  | 0.35     | 1,484,518     |                        |
|                  | Mar – 15                                  | 1,333,690       | 0.06 | 0.09 | 0.0854 | 36,021,869  | 0.15     | 745,669       |                        |
|                  | Jun – 15                                  | 1,363,108       | 0.06 | 0.10 | 0.0854 | 36,266,564  | 0.15     | 682,396       |                        |
|                  |                                           |                 |      |      |        |             |          |               |                        |
| NIC              | Mar – 14                                  | 2,346,809       | 0.12 | 0.09 | 0.0000 | 78,558,601  | 0.12     | 1,261,950     | 1,838,129              |
|                  | Jun – 14                                  | 4,312,066       | 0.09 | 0.09 | 0.0987 | 91,517,322  | 0.19     | 1,462,905     |                        |
|                  | Dec - 14                                  | 3,721,020       | 0.07 | 0.09 | 0.0854 | 94,424,035  | 0.16     | 3,356,426     |                        |
|                  | Mar – 15                                  | 2,882,302       | 0.03 | 0.09 | 0.0854 | 97,748,567  | 0.12     | 1,341,676     |                        |
|                  | Jun – 15                                  | 4,850,944       | 0.09 | 0.10 | 0.0854 | 108,303,620 | 0.18     | 1,767,690     |                        |
| First community  | Mar - 14                                  | 210.623         | 0.11 | 0.09 | 0.0000 | 7 460 360   | 0.11     | 22 293        | <i>A</i> 1 19 <i>A</i> |
| T list community | $\frac{1}{1}$                             | 210,025         | 0.11 | 0.09 | 0.0000 | 8 658 287   | 0.11     | 22,293        | +1,174                 |
|                  | $\frac{Jull - 14}{Dac} = 14$              | 534.430         | 0.01 | 0.09 | 0.0987 | 0,765,500   | 0.11     | 51 143        |                        |
|                  | $\frac{\text{Dec} - 14}{\text{Mor} - 15}$ | 284,439         | 0.13 | 0.09 | 0.0034 | 9,703,309   | 0.22     | 51,145        |                        |
|                  | $\frac{1}{1}$                             | 204,411         | 0.03 | 0.09 | 0.0054 | 10,119,104  | 0.11     | 26,706        |                        |
|                  | Jun – 15                                  | 285,940         | 0.02 | 0.10 | 0.0854 | 10,723,169  | 0.11     | 36,796        |                        |
| Family bank      | Mar – 14                                  | 2,947,954       | 0.26 | 0.09 | 0.0987 | 33,044,674  | 0.36     | 1,311,918     | 1,080,268              |
|                  | Jun – 14                                  | 3,268,251       | 0.26 | 0.09 | 0.0854 | 37,925,476  | 0.34     | 1,306,441     |                        |
|                  | Dec - 14                                  | 1,719,175       | 0.08 | 0.09 | 0.0854 | 42,072,503  | 0.16     | 775,582       |                        |
|                  | Jun – 15                                  | 1,926,193       | 0.08 | 0.10 | 0.0854 | 46,311,747  | 0.17     | 927,130       |                        |
|                  |                                           | 6 500 5 10      | 0.16 | 0.00 | 0.0000 | 150 100 005 | 0.16     | 4.756.406     | 6 656 014              |
| Equity bank      | Mar – 14                                  | 6,529,542       | 0.16 | 0.09 | 0.0000 | 159,188,825 | 0.16     | 4,756,406     | 6,656,314              |
|                  | Jun – 14                                  | 6,672,658       | 0.06 | 0.09 | 0.0987 | 165,138,876 | 0.16     | 5,080,716     |                        |
|                  | Dec – 14                                  | 22,164,800      | 0.39 | 0.09 | 0.0854 | 187,976,229 | 0.47     | 12,526,878    |                        |
|                  | Mar – 15                                  | 7,299,680       | 0.06 | 0.09 | 0.0854 | 195,503,777 | 0.15     | 5,380,285     |                        |
|                  | Jun – 15                                  | 7,616,408       | 0.06 | 0.10 | 0.0854 | 205,249,347 | 0.15     | 5,537,285     |                        |
| GIRO BANK        | Mar – 14                                  | 267.945         | 0.18 | 0.09 | 0.0000 | 5.857.223   | 0.18     | 126.947       | 126.703                |
|                  | Jun – 14                                  | 268.205         | 0.04 | 0.09 | 0.0987 | 7.526.765   | 0.14     | 108.356       |                        |
|                  | Dec - 14                                  | 613.850         | 0.23 | 0.09 | 0.0854 | 7.716.949   | 0.32     | 160,286       |                        |
|                  | Mar – 15                                  | 300,945         | 0.06 | 0.09 | 0.0854 | 8,313,736   | 0.14     | 126,694       |                        |
|                  | 1                                         | 1               |      | 1    |        |             |          |               |                        |

| Name of the Bank        | Period   | Interest income | K    | СВК  | KBRR   | Р          | Interest | Profit B4 Tax | Average   |
|-------------------------|----------|-----------------|------|------|--------|------------|----------|---------------|-----------|
|                         |          | Amount in '000' |      | Rate |        |            | Rate     |               | Profit    |
|                         | Jun – 15 | 306,520         | 0.06 | 0.10 | 0.0854 | 8,603,344  | 0.14     | 111,233       |           |
|                         |          |                 |      |      |        |            |          |               |           |
| GT Bank                 | Mar – 14 | 366,078         | 0.16 | 0.09 | 0.0000 | 9,387,700  | 0.16     | 163,462       | 199,990   |
|                         | Jun – 14 | 359,340         | 0.05 | 0.09 | 0.0987 | 9,618,747  | 0.15     | 199,481       |           |
|                         | Dec - 14 | 825,884         | 0.18 | 0.09 | 0.0854 | 12,440,504 | 0.27     | 323,797       |           |
|                         | Mar – 15 | 413,152         | 0.07 | 0.09 | 0.0854 | 10,893,074 | 0.15     | 155,153       |           |
|                         | Jun – 15 | 374,154         | 0.05 | 0.10 | 0.0854 | 11,207,219 | 0.13     | 158,057       |           |
|                         |          |                 |      |      |        |            |          |               |           |
| Gulf bank               | Mar – 14 | 755,392         | 0.16 | 0.09 | 0.0854 | 12,484,920 | 0.24     | 143,380       | 276,465   |
|                         | Jun - 14 | 1,623,569       | 0.39 | 0.09 | 0.0854 | 13,790,646 | 0.47     | 339,427       |           |
|                         | Mar - 15 | 403,091         | 0.04 | 0.09 | 0.0854 | 12,891,916 | 0.13     | 240,557       |           |
|                         | Jun – 15 | 501,091         | 0.07 | 0.09 | 0.0854 | 13,224,186 | 0.15     | 382,497       |           |
|                         |          |                 |      |      |        |            |          |               |           |
| Habib bank AG<br>Zurich | Jun – 14 | 158,717         | 0.12 | 0.09 | 0.0987 | 2,938,634  | 0.22     | 217,662       | 243,888   |
|                         | Dec – 14 | 177,838         | 0.13 | 0.09 | 0.0854 | 3,357,633  | 0.21     | 424,908       |           |
|                         | Mar – 15 | 101,739         | 0.02 | 0.09 | 0.0854 | 3,911,422  | 0.10     | 108,443       |           |
|                         | Jun- 15  | 108,707         | 0.01 | 0.10 | 0.0854 | 4,440,566  | 0.10     | 224,538       |           |
|                         |          |                 |      |      |        |            |          |               |           |
| HFCK                    | Mar – 14 | 1,281,868       | 0.14 | 0.09 | 0.0000 | 37,247,152 | 0.14     | 284,604       | 386,903   |
|                         | Jun – 14 | 13,464,450      | 1.30 | 0.09 | 0.0854 | 38,806,810 | 1.39     | 326,219       |           |
|                         | Dec - 14 | 4,532,411       | 0.32 | 0.09 | 0.0854 | 45,243,539 | 0.40     | 673,980       |           |
|                         | Mar – 15 | 1,633,277       | 0.05 | 0.09 | 0.0854 | 47,688,648 | 0.14     | 263,612       |           |
|                         | Jun - 15 | 1,728,508       | 0.05 | 0.09 | 0.0854 | 49,983,514 | 0.14     | 386,100       |           |
|                         |          |                 |      |      |        |            |          |               |           |
| I & M                   | Jun – 14 | 5,474,428       | 0.17 | 0.09 | 0.0987 | 80,750,908 | 0.27     | 3,185,717     | 2,934,299 |
|                         | Dec – 14 | 6,152,891       | 0.19 | 0.09 | 0.0854 | 89,866,260 | 0.27     | 4,563,408     |           |
|                         | Mar – 15 | 3,195,249       | 0.05 | 0.09 | 0.0854 | 93,655,309 | 0.14     | 2,108,399     |           |
|                         | Jun – 15 | 3,372,972       | 0.05 | 0.10 | 0.0854 | 98,378,032 | 0.14     | 1,879,672     |           |
|                         |          |                 |      |      |        |            |          |               |           |
| K REP                   | Mar – 14 | 516,193         | 0.21 | 0.09 | 0.0000 | 9,702,665  | 0.21     | 171,811       | 211,158   |

| Name of the Bank    | Period                                    | Interest income | K    | CBK  | KBRR   | Р           | Interest | Profit B4 Tax | Average                                 |
|---------------------|-------------------------------------------|-----------------|------|------|--------|-------------|----------|---------------|-----------------------------------------|
|                     | X 14                                      | Amount in '000' | 0.12 | Rate | 0.0007 | 10.070.5(1  | Rate     | 125.064       | Profit                                  |
|                     | Jun – 14                                  | 548,555         | 0.12 | 0.09 | 0.0987 | 10,079,561  | 0.22     | 135,864       |                                         |
|                     | Dec – 14                                  | 1,094,793       | 0.33 | 0.09 | 0.0854 | 10,606,254  | 0.41     | 421,386       |                                         |
|                     | Mar – 15                                  | 570,501         | 0.12 | 0.09 | 0.0854 | 11,095,854  | 0.21     | 172,588       |                                         |
|                     | Jul – 15                                  | 558,976         | 0.15 | 0.10 | 0.0854 | 9,702,665   | 0.23     | 154,141       |                                         |
| National bank       | Mar – 14                                  | 1 553 908       | 0.13 | 0.09 | 0.0000 | 47 193 129  | 0.13     | 530 786       | 955 293                                 |
|                     | Iun 14                                    | 1,355,900       | 0.13 | 0.09 | 0.0000 | 54 717 166  | 0.13     | 633.024       | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
|                     | $\frac{14}{2}$                            | 1,703,733       | 0.03 | 0.09 | 0.0987 | 55 641 401  | 0.13     | 1 168 070     |                                         |
|                     | $\frac{\text{Dec} - 14}{\text{Mor} - 15}$ | 4,243,300       | 0.22 | 0.09 | 0.0034 | 70.050.260  | 0.31     | 692 544       |                                         |
|                     | $\frac{1}{1}$                             | 2,250,157       | 0.04 | 0.09 | 0.0054 | 70,030,300  | 0.13     | 1 761 042     |                                         |
|                     | Jun – 15                                  | 2,355,221       | 0.05 | 0.10 | 0.0854 | /1,435,301  | 0.15     | 1,701,042     |                                         |
| middle east         | Mar – 14                                  | 106,729         | 0.12 | 0.09 | 0.0000 | 3,704,597   | 0.12     | (9,824)       | 5,274                                   |
|                     | Jun - 14                                  | 173,651         | 0.08 | 0.09 | 0.0987 | 3,795,928   | 0.18     | 37,280        |                                         |
|                     | Dec – 14                                  | 274,056         | 0.23 | 0.09 | 0.0854 | 3,466,021   | 0.32     | 48,828        |                                         |
|                     | Mar - 15                                  | 91,377          | 0.02 | 0.09 | 0.0854 | 3,583,862   | 0.10     | (30,914)      |                                         |
|                     | Jun – 15                                  | 106,518         | 0.03 | 0.10 | 0.0854 | 3,799,497   | 0.11     | (18,998)      |                                         |
|                     |                                           |                 |      |      |        |             |          |               |                                         |
| prime bank          | Mar – 14                                  | 913,432         | 0.13 | 0.09 | 0.0000 | 27,388,791  | 0.13     | 808,477       | 703,312                                 |
|                     | Jun – 14                                  | 1,068,796       | 0.04 | 0.09 | 0.0987 | 30,788,737  | 0.14     | 373,291       |                                         |
|                     | Dec - 14                                  | 2,202,620       | 0.17 | 0.09 | 0.0854 | 34,481,269  | 0.26     | 1,115,912     |                                         |
|                     | Mar – 15                                  | 1,094,528       | 0.04 | 0.09 | 0.0854 | 34,894,270  | 0.13     | 893,963       |                                         |
|                     | Jul – 15                                  | 1,189,834       | 0.04 | 0.10 | 0.0854 | 39,262,172  | 0.12     | 324,919       |                                         |
| Standard abortariad | Mor 14                                    | 2 077 611       | 0.12 | 0.00 | 0.0000 | 127 587 001 | 0.12     | 2 599 275     | 2 079 509                               |
| Standard Chartered  | 1 $1$ $1$ $1$ $1$ $1$ $1$ $1$ $1$ $1$     | 2 974 599       | 0.12 | 0.09 | 0.0000 | 121,507,091 | 0.12     | 2,300,273     | 3,978,308                               |
|                     | $\frac{Jun - 14}{D_{14}}$                 | 3,874,388       | 0.02 | 0.09 | 0.0987 | 131,099,700 | 0.12     | 5,499,580     |                                         |
|                     | Dec – 14                                  | 7,821,601       | 0.17 | 0.09 | 0.0854 | 122,749,421 | 0.25     | 6,211,957     |                                         |
|                     | Mar – 15                                  | 3,669,947       | 0.04 | 0.09 | 0.0854 | 114,060,421 | 0.13     | 2,456,041     |                                         |
|                     | Jun – 15                                  | 5,083,053       | 0.08 | 0.10 | 0.0854 | 123,256,000 | 0.16     | 3,136,686     |                                         |
| Trans national      | Mar – 14                                  | 231,104         | 0.17 | 0.09 | 0.0000 | 5,527,742   | 0.17     | 35.034        | 63.605                                  |
|                     | Jun - 14                                  | 257,327         | 0.10 | 0.09 | 0.0987 | 5,288,024   | 0.19     | 69,431        | ,                                       |

| Name of the Bank | Period   | Interest income | K    | CBK  | KBRR   | Р         | Interest | Profit B4 Tax | Average |
|------------------|----------|-----------------|------|------|--------|-----------|----------|---------------|---------|
|                  |          | Amount in 000   |      | Kate |        |           | Kate     |               | Profit  |
|                  | Dec – 14 | 551,725         | 0.27 | 0.09 | 0.0854 | 6,162,672 | 0.36     | 86,351        |         |