THE RELATIONSHIP BETWEEN LENDING INTEREST RATE AND PROFITABILITY OF COMMERCIAL BANKS IN KENYA

BY

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DECLARATION

This research project is my original work and has not been submitted for a degree in this university or any other institution.

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

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DEDICATION

This project is dedicated to my family especially my father for the love, patient, support and faith they had in me throughout the entire study period. I will always appreciate all they have done.

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LIST OF ABBREVIATIONS

ANOVA	-	Analysis of Variation
BLR	-	Base Lending Rate
CA	-	Capital adequacy
CBK	-	Central Bank of Kenya
CBR	-	Central Bank Rate
MPC	-	Monetary Policy Committee
NPLs	-	Nonperforming Loans
ROD	-	Return on Deposits
ROE	-	Return on Equity
ROI	-	Return on Investment
SAP	-	Structural Adjustment Programme
TA	-	Total Assets
SPSS	-	Statistical Package for Social Sciences

ABSTRACT

Over the years commercial banks in Kenya have been performing tremendously. In Kenya, the bank lending interest rates are always charged on loans by the commercial banks to private individual and companies. The main objective for the study was to determine to what extent lending interest rates affect profitability of commercial banks. The study used descriptive research design using secondary data obtained from Central Bank of Kenya for the period of five years from 2010 to 2014 as well as published commercial banks annual reports 2014. Data obtained was analyzed using SPSS version 2.0 and results obtained tested for significance using ANOVA. The study found that lending interest rates have significant positive effect on financial performance of commercial banks in Kenya at 95% confidence level. The relationship between lending interest rates and profitability of commercial banks was also found to be linear with increase in lending interest rates leading to higher profitability. The study also concluded that bank size, capital adequacy, and operational costs all significantly had effect on profitability of commercial banks. The study recommended that policies to be put in place to shield bank lending rates and ensure monitoring the same.

CHAPTER ONE
INTRODUCTION

1.1 Background of the study

Profitability measures the firm's ability to generate revenue in excess of expense an accomplishment that is necessary if the firm is to be considered a going concern Coleman (2007). Therefore the indicators of the profitability is the profits made by the business , the growth and expansion, cost of the operation incurred and demand for goods and services excess of return over cost economies of scale market power and cost control.

The pace of change from a high-transaction cost, centrally planned economy, to a low-transaction cost, market-oriented economy, involves a complex process of adjustment to efficient rules. In an analysis of the portfolio mechanism of money growth and capital formation, an increase in the rate of inflation would lower the rate of return of fiat money relative to that of capital, thereby increasing capital and increasing real output. The seminal works of McKinnon and Shaw, (1973), argue that high real interest rates tend to encourage savings, whilst savings determine investment. Lending rates liberalization and low inflation can therefore promote capital accumulation and economic growth in less developed countries.

Many commercial banks have increased their holdings of long-term assets and liabilities, whose values are more sensitive to rate changes. Such changes mean that managing lending interest rate risk is far more important and complex than it was just a decade ago. The nature of a bank's business activities and overall levels of risk should determine how sophisticated its management of interest should be. Every well managed bank, however, will have a process that enables bank management to identify, measure, monitor, and control interest risk in a timely manner.

However, in Kenya there has been an overall outcry that banks make a lot of profits due to high interest disparity between the rates given on deposits and loans. On closer scrutiny we realize that despite some banks making high profits some are actually making losses or very small margins despite having the same lending interest rates prevailing form the central bank of Kenya.

1.1.1Lending Interest Rates

An interest rate is described as the price a borrower pays for the use of money he does not own, and has to return to the lender who receives for deferring his consumption, by lending to the borrower. Interest can also be expressed as a percentage of money taken over the period of one year, Devereux and Yetman (2002).An Interest, which is charged or paid for the use of money, is often expressed as an annual percentage of the principal. Lending interest rates often change as a result of the inflation and Government policies. It is also a tool used by the central bank of a country to keep a check on any major currency fluctuation. An increase in lending rates is necessary to stabilize the exchange rate depreciation and to curb the inflationary pressure and thereby helps to avoid many adverse economic consequences.

Before the implementation of the structural adjustment programme (SAP) in 1983 the financial sector in Kenya suffered from severe repression. Lending rates were maintained below the market rates and direct control of credit was the primary monetary control instrument of the authorities, Naude(1995). Uncompetitive banking systems, inadequate regulatory framework and borrowers that are insensitive to interest rates undermine the efficiency of market based credit allocation. Accompanying the SAP, interest rates deregulation took place in 1991. The Kenyan government adopted the CBK amendment act (commonly called the Donde Act) in 2001. The act allows CBK to regulate lending interest rates.

It is widely believed that fluctuations of market lending rates are significant influenced on the performance of commercial banks. According to Samuelson(1945), under general conditions, bank profits increase with rising lending rates .He argued that the banking system as a whole is immeasurably helped rather than hindered by an increase in interest rates. A more accurate measurement of how fluctuations in market interest rates affect banking firms largely depends on the sensitivity of banks' assets and liabilities. When interest rates fluctuate as result of changes in monetary policy or general economic conditions, commercial banks usually encounter a comparative change in the rate of return they earn on their assets. This occurs because banks hold many assets of relatively short maturity and the rates booked on short period loans fluctuate quickly when lending rates fluctuate.

Banks' investment portfolio components such as mortgage rates, business term loans, rates on bank credit card loans, and real assets such as rental offices, when lending interest rates decrease they do encounter rapidly falling yields. Consequently, even the longer period components of a bank's assets portfolio are susceptible to yield declines when market rates fall, although their yields fall more gradually than short period yields. In the short run, however, as general market lending rates descend, the market value of longer assets with fixed contractual terms will rise.

1.1.2 Profitability

Profit is the ultimate goal of commercial banks .All the strategies designed and activities performed are geared towards realizing these grand objective. Therefore, profitability is the process of evaluating relationships between component parts of financial statements to obtain a better understanding of the firm's financial position. The analysis involves selection from the total information available to those relevant to the decision under consideration, arranging the information in a manner that would bring out the relationship and a study of the relationships and interpretation of the results thereof. The techniques widely used for analysis are; ratio analysis, trend analysis and cross sectional analysis, (Pandey,1997).

At the macro level, a sound and profitable banking sector is able to better withstand negative shocks and contribute to the stability of the financial system. Bank profits provide an important source of equity especially if re-invested into the business. This should lead to safe banks, and as such high profits could promote financial stability, (Flamini , McDonald and Schumacher , 2009).

The overall profitability of the banking sector in Kenya has improved tremendously over the last 10years however despite the overall good picture a critical analysis indicates that, not all banks are profitable. For example the small and medium financial institutions which constitute about 57% of the banking sector posted a combined loss before tax, of Ksh.0.09 billion in 2009 compared to a profit before tax of Ksh 49.01 billion posted by the big financial institutions (CBK 2009).The huge profitability enjoyed by the large banks verses the small and medium bank indicates that there are some significant factors that influence the profitability of commercial banks. Flamini et al. (2009) and other several studies have shown that bank profitability is influenced by bank specific factors and industry specific factors.

Aburime (2009) observed that the importance of bank profitability can be appraised at the micro and macro levels of the economy .At the micro level, profit is the essential prerequisite of a competitive banking institution and the cheapest source of funds. It is not merely a result, but also a necessity for successful banking in a period of growing competition on financial markets. Hence the basic aim of every bank management is to maximize profit as an essential requirement for successful banking in a period of growing competition on financial markets. Hence the basic aim of every bank management is to maximize profits as an essential requirement for conducting business.

Banking in Kenya has for the past decade undergone many regulatory and financial reforms. These reforms have brought about many structural changes in the sector and have also encouraged foreign banks to enter and expand their operations in the country. Kenya's financial sector is largely bank-based as the capital market is still considered

narrow and shallow. Banks dominate the financial sector in Kenya and as such the process of financial intermediation in the county depends heavily on commercial banks, (Kamau, 2009). In fact, Oloo (2009) describes the banking sector as the bond that holds the country's economy together. Sectors such as the agricultural and manufacturing virtually depend on the banking sector for their survival and growth. The performance of the banking industry in Kenya has improve tremendously over the last 10years,as only two banks have been put under CBK statutory management during this period compared to 37banks-failures between 1986 and1998.

The principle motivating force in any business is profitability, though of course it's not the only motive in any business, it is always the most important (Musumeno, 2001) .Therefore, there should always be an adequate return on capital invested if any business is to be successful and the argument for this is that the success of any business basically depends on the profitability that it enjoys.

1.1.3 Effect of Lending Interest Rates on Profitability

According to Théoden and Nathan(1999) they noted that when interest are low people are willing to borrow lending rates because they find it relatively easy to repay their debts .However when interest are high people are reluctant to borrow because repayment on loans cost more . Some consumers may even find it difficult to meet their existing loan repayments, especially if interest rate increases faster than the rise in the consumer income. In addition, if rates rise sharply some consumers will default on their loans. These points out those high rates can hinder the growth of savings and investments and imply that the cost of using the financial system is prohibitive for certain borrowers and therefore low margin.

Ndungu and Ngugi(2000) explained that macroeconomic environment is identifying as both a cause and a consequence affecting lending rates. The chain reaction triggered off by macroeconomic instability increases uncertainty hence impacting adversely on borrower's credit worthiness thus increasing the risk premium charged by banks. The

macroeconomic environment affects the performance of the banking sector by influencing the ability to repay borrowed loans, the demand for loans with the unpredicted returns from investments and the quality of collateral determine the amount of premium charged and therefore the cost of borrowed funds to the investors. With an unstable macroeconomic environment and poor economic growth, investors face uncertainty about investment return and these raises the lending rates.

Baghwan Chowdhry (2010) concur that the bank profit is derived from the difference between the interest rate it charges by lending and interest it pays for the deposit. If bank is not lending then there are no profits from the deposits. Therefore, high lending rates can have a major implication for financial intermediation as they can increase the cost of capital which in turn limits financial resources available to potential borrowers thereby reducing the volume of investment opportunities and reducing it to sub optimal level. Moreover wider spread might reflect a number of problems such as bank unsoundness and moral hazard.

Businesses are also indirectly affected by an increase in the discount rate as a result of the actions of individual consumers. But businesses are affected in a more direct way as well. They, too, borrow money from banks to run and expand their operations. When the banks make borrowing more expensive, companies might not borrow as much and will pay a higher rate of interest on their loans. Less business spending can slow down the growth of a company, resulting in decreases in profit. Securities of firms making continuous losses, usually suffer from price decline, (Kisaka, 1999).

1.1.4 Commercial Banks in Kenya

According to Thygerson (1995)commercial banks perform the role of servicing and portfolio risk management. Commercial banks in Kenya among other roles act as intermediaries between savers and borrowers, provide investment opportunities for savers and provide savers with experts in financial management. Commercial banks in Kenya among other roles act as intermediaries between savers and borrowers, provide

investment opportunities for savers and provide savers with experts in financial management. Commercial banks in Kenya are not an exception, with a total of 43 strong commercial banks; competition is stiff even as the Central Bank of Kenya (CBK) regulates the market to enhance fairness both to the consumers and among banks.

The stochastic behavior of market rates is also a significant factor that determines the way banks adopt in delivering their services. Desmukh S. (1983) showed that in a volatile interest rate environment, banks minimize their risk exposure by performing the role of brokers, merely atching the arrival of assets and liabilities. The impact of variations in market interest rates on bank profitability is ambiguous; it largely depends on the degree of responses of asset and liability rates. Since both sides of banks balance sheets are affected by market interest rates in a parallel fashion, the net impact on banks profitability can be deduced by tracing the responses of both assets and liabilities as market interest rates changes.

In Kenya, lending interest decisions are taken by the Monetary Policy Committee (MPC) of the Central Bank of Kenya. The monetary policy implies that the central bank should manage liquidity in such a manner that the interbank rates stays near or generally slightly below the level of the CBR. Like in other countries worldwide, the CBR as a monetary policy instrument is supported by other facilities such as the level of deposit and lending rates, maintenance regime of the cash reserve requirement, clearing transactions, secured short-term lending among commercial banks, and open market operations.

Banks all over the world gets a large percentage of profits from interest on lending; there has been a serious debate on the difference between interest of borrowing and interest of lending. For instance, sometime back, despite clear signal from the Central Bank of Kenya on the direction interest rate ought to take in the market; Commercial Banks had been slow to respond. Weeks after the monetary policy committee cuts its base lending rates from 18% to 16.5% only few banks had announced the reduction in interest rates. This could be a concern for many borrowers who have had to struggle with the high

interest environment. Furthermore, the interest rate spread in Kenya's Commercial Banks may remain wide, unless banks manage to increase their customer deposits,(Info track-COFECK, 2011).

1.2 Research Problem

In Kenya, the bank lending interest rates are always charged on loans by the commercial banks to private individual and companies. The main function of the lending rates is to entice those with the money to lend it to other individuals or organizations. If there are no financial institutions then there is no reason to lend the money. This could ultimately, be very harmful to the economy and cause hardship to the borrower. Since 1991, the commercial banks were allowed too freely quote their own BLR based on a standardized formula, which takes the funding cost into account. The standardized formula is matched to ensure that the BLR will move in synchronization with market conditions. A further benefit of the BLR is that it would be reflective of both movements in cost of funds and lending rates. Profitability of bank is described as income by interest or non-interest and after tax profits which are computed as an amount of income (both interest & non-interest) after the subtraction of provisions and operating costs, (Albertazzi & Gambacorta, 2006).

In Kenya lending interest rates is not stable as it fluctuates depending on the Central bank Rate that monetary policy Committee has settled on. In 2010, average annual lending interest rate was 15.05%, in 2011 average lending interest rate was 15.05% while annual lending interest rate was 20.04%,and in 2012 average lending interest rate for March, June, September and December was 20.34% ,20.30%,19.73% and 18.15 respectively . in 2013 average lending interest rate for March, June, September and December was 17.73%,16.97%,16.86% and 16.99%.While in 2014 average lending interest rate for March, June, September and December was 16.91%,16.36%,16.04% and 15.99 respectively. Lending interest rate declined in 2014 as Central bank Rate was retained at 8.5% throughout the year (Central Bank of Kenya, 2010-2014).

On the other hand when we look at the profitability of the banking sector we see a gradual increase over the years. In December 2010, profit before taxes was Ksh.74.3 billion, in December 2011 Ksh.89.5 billion which was 20.5% increase, in December 2012 Ksh. 107.9 billion, in December 2013 Ksh.125.8 billion and lastly in December 2014 Profit before taxes was Ksh. 139.8 billion. The need for this study has been first drawn to the fact that lending interest rates do fluctuate as evidenced by Central bank of Kenya banks annual reports from 2010-2014 as well as gradual increases in banking sector profit before taxes.

The Second need for this study is further supported by the fact that most studies conducted in relation to bank performances in Kenya has focused on interior determinants that affect banks performance with no study focusing on lending interest rates and commercial banks financial performance. Mwangi (2014) studied whether there was a relationship between interest rates and the financial performance of Deposit Taking Microfinance Institutions in Kenya. On the other hand Were et al. (2014) investigated the determinants of interest rate spread in Kenya's banking sector.

Simiyu and Ngile (2015) investigated the effect of macroeconomic variables on financial profitability of listed commercial banks in the Nairobi Securities Exchange (NSE).Prior empirical research generally investigates determinants of banks' profitability on different levels and directions, (Ommeren,2011). And as such, curiosity is to investigate whether lending interest rates would have played part in the yearly increase in the profitability of the banking sector lead to this research. Therefore the main research question that this study sought to answer is''what is the relationship between lending interest rate and profitability of commercial banks in Kenya?''

1.3 Research Objective

To establish the relationship between lending interest rates and profitability of Commercial banks in Kenya.

1.4 Value of the Study

The study will help provide useful information to Commercial bank as to what interest levels can lead to profitability. It also helps the banking industry; especially decision makers involved in implementing interest rates for their banks will draw inference in developing mechanism and policies to take advantage of interest rates in the market. In the Central Government, the study will help in formulation of their monetary policy with respect to evolving economic and political environment.

This will effectively help in planning and stabilizing the economy to ensure a steady economic growth. Central Bank being the regulator of operations of commercial banks, the study informs the CBK in formulation of policies geared towards regulation of interest rates in the banking sector. The study is invaluable to management of the Commercial banks as they will be able to uncover the relationship that the interest rates spread have with the performance of their organization. The findings in this of this study can be useful to scholars and academicians who may wish to use them as a basis for further research on this subject.

CHAPTER TWO
LITERATURE REVIEW

2.1Introduction

This chapter focuses on the general view on the banking sector and discusses literature related to the study's problem area in order to provide a basis of developing an understanding and establishing appropriate scope in aligning objectives to existing knowledge. Literature review is organized in three main areas. The first section is the theoretical review, followed by determinants of profitability and empirical evidence.

2.2Theoretical Review

In this section, the study is greatly interested with lending interest rates and the various theories of lending interest rates supported by different authors.

2.2.1 Liquidity Preference Theory

Liquidity preference theory was first advanced by Keyness (1936). He stated that the interests are determined by the demand and supply of money balances. The theory assumes that people's demand for money is not for transactions purpose but as a precaution and for speculative purposes, whereby, the transaction demand and precautionary demand for money increase with income, while the speculative demand is inversely related to interest rates because of the forgone interest. He further stated that investors will always prefer short term securities to long term securities. To encourage them hold long term bonds, long term securities should yield higher interests than short term bonds.

Therefore, the yield curve will always be upward sloping. It is based on the observation that, all else being equal, people prefer to hold on to cash and that they will demand a premium for investing in non-liquid assets such as bonds, stocks, and real estate. The theory also suggests that the premium demanded for parting with cash increases as the term for getting the cash back increases. According to Auerbach (1988), stated that the

rate in the increase of the premium slows down with the increase in the period for getting the cash back. In financial terms, this theory is expressed as "forward rates should exceed the future spot rates". The expectation, therefore, is that forward exchange rates should offer a premium over expected future spot exchange rates since those who are risk-averse demand a premium for securities with longer-term maturities. A premium is offered by way of greater forward rates in order to attract investors to longer-term securities.

In the general theory of employment, people's ability to save depends very much upon their level of income. Therefore, Reilly and Norton(2006)stated that the theory of liquidity preference holds that long term securities should provide higher returns than short term obligations because investors are willing to sacrifice some yields to invest in short maturity obligations to avoid the higher price volatility of long maturity bonds.

Were and Wambua (2014) argued that the liquidity preference theory of interest suffers from a fallacy of mutual determination. Keynes alleges that the rate of interest is determined by liquidity preference. In practice, however, Keynes treats the rate of interest as determining liquidity preference. Therefore, Keynesians treat the rate of interest, not as they believe they do- as determined by liquidity preference but rather as some sort of mysterious and unexplained force imposing itself on the other elements of the economic system.

In relevance to the study, interests are purely driven by demand and supply of money in the economy whereby, interests tend to go up and down according to the level of liquidity in the economy and preference for the liquidity by users of the funds. Hence, the variation in the premium depends totally on the scope of payment in the liquidity level of the economy. The mathematical implication of the preference theory of interest finds expression in the discount function which simply means that with increase in the preference, the discount rates escalate on the receivable returns in future.

2.2.2 Loanable funds Theory

Loanable funds theory was first developed by Froyen (1996) he stated that the rate of interest is determined at that level which equates the supply of securities with the demand for them and the factors that determines interests are real investment demand and real saving, what the new classical economist called the forces of 'productivity and thrift'. The determination of the interest rate in case of the loanable funds theory of the rate of interest depends essentially on the availability of loan amounts. The availability of such loan amounts is based on certain factors like the net increase in currency deposits, the amount of savings made willingness to enhance cash balances and opportunities for the formation of fresh capitals.

According to Fixler and Zieschang (1998) he stated that this theory is a dynamic and optimizing theory of the bank operation that integrates insights of production theory, financial intermediation and portfolio theories. The unified model clarifies the relationship between the risk of asset portfolios and a bank's output of services. Portfolio risk determines the rate of return on loans and banks' borrowed funds and in turn the discount used to derive the present value of future profits part of which are generated by bank services. The quantity of the service output is affected by risk only to the extent that portfolios of different risk require different amounts of information processing. In addition, the models show the loanable funds are merely an intermediate input that passes through banks, whereas true bank value added is only the services facilitating the provision of funds. The model further establishes separability between the use of funds and production functions of value added in a bank's overall optimization problem.

The relevance of the theory to the study is that, in the loanable funds theory of interest the nominal rate is determined by the interaction between the demand and supply of loanable funds. Keeping the same level of supply, an increase in the demand for loanable funds would lead to an increase in the interest and the vice versa. Also, an increase in the supply of loanable funds would result in fall in the rate but if both demand and supply of

the loanable funds change, the resultant rate would depend much on the magnitude and direction of movement of the demand and supply of the loanable funds.

2.2.3 Expectations Theory

This theory was first developed by Moore (1988).He stated that the theory is based on the idea that people formulate expectations based on all the information that is available in the market. It holds that the best estimation for future interests is the current spot rate and that changes in the interests are primarily due to unexpected information or changes in the economic factors. The rational expectation theory can be incorporated with loanable funds theory in order to better consider the available information with the economy.

The limiting factor of rational expectation theory is mostly related to the difficulty in gathering information and understanding how the public uses its information to form its expectations. Russell(1992)he stated that the theory is built on the premise of expectations that people will have in regard to future conditions. If investors expect future interests to be high, they will prefer to hold long term securities and if the vice versa is true, they will prefer short term securities.

According to Campbell(1998) the expectations theory of the term structure implies that a longer term interest and a shorter term interest forecasts two subsequent interest changes; the change in the yield of the longer-term bond over the life of the shorter-term bond, and weighted average of the changes in shorter-term rates over the life of the longer-term bond. Therefore, the longer-term rates contain a prediction of future short-term rates. It further postulates that you would earn the same amount interest by investing in a one year bond today and rolling that investment into one year bond later compared to buying a two year bond today. Hence, investors expecting higher short-term rates are more likely to buy bonds maturing in the short term but if they were to invest money into a long term bond they might not be able to make as much interest.

The relevance of the theory to this study is that outcomes do not differ systematically from the expectations due to the forecasting rules which implies that higher profits accrue to investors who acts on the basis of better forecast so as to eliminate avoidable errors. Investors also consider yields because longer-term bonds tend to pay more than shorter-term bonds that add up to the same maturity but they prefer short term bonds but are only interested in longer term bonds if they pay a risk premium.

2.3 Determinants of Profitability

Most of the studies on bank profitability have categorized the determinants of profitability into internal and external factors, (Rasiah, 2010 and Khrawish, 2011). The internal factors are the individual bank characteristics which affects the bank performance, while the external factors are sector-wide factors which are beyond the control of the company and affect profitability of the banks. However, there is general agreement that bank profitability is a function of internal and external factors.

2.3.1 Lending Interest Rates

Lending rates is associated with the macroeconomic instability which affects the performance of the banking sector. According to Ndungu and Ngugi (2000) he explained that macroeconomic environment identify as both a cause and a consequence affecting lending rates. The chain reaction triggered off by macroeconomic instability increases uncertainty hence impacting adversely on borrower's credit worthiness thus increasing the risk premium charged by banks. The macroeconomic environment affects the performance of the banking sector by influencing the ability to repay borrowed loans, the demand for loans with the unpredicted returns from investments and the quality of collateral determine the amount of premium charged and therefore the cost of borrowed funds to the investors. With an unstable macroeconomic environment and poor economic growth, investors face uncertainty about investment return and these raises the lending rates.

2.3.2 Capital Adequacy

According to the study that was carried out by Athanasoglu et al. (2005) he argued that capital adequacy is one of the banks specific factors that influence profitability of the bank as it is the amount of owns fund that support the banks business and act as buffer in case of adverse situation. It is measured by the ratio of equity to total assets of a bank. Generally, banks with high capital ratio, if other factors are constant, will face relatively lower financial difficulties during general financial crisis within the economy and this will translate to high profits. Also, well capitalized banks are able to meet the capital requirements set by central bank while the excess can be used to provide loans.

2.3.3 Bank Size

Size is measured by the natural log of level of assets of the bank. It accounts for economies and diseconomies of scale. Therefore, a study by Obamuyi (2013), argued that bank enjoys economies of scale up to a certain level, beyond which they start experiencing diseconomies of scale which results to a mixed relationship between size and profitability. When low interest rates are charged to borrowers, larger banks would earn low profits, however, if larger banks control big share of the market in a non-competitive environment, they may earn higher profits through high lending rates, and low deposit rates. But ideally, bigger banks would expect to be associated with lower interest rates because of large economies of scale and ability to invest in technology that would enhance efficiency.

2.4 Empirical Evidence

In this research a lot has been reviewed in terms of lending activities of various commercial banks. Some opinions deliberated on the factor responsible for banks willingness to extend much credit to some sector of the economy. This section has reviewed some of the studies, their methodology and findings.

2.4.1 International Evidence

Khan et al. (2014) analyzed the impact of interest rates changes on the profitability of commercial banks being operated in Pakistan by examining the financial statements of four major banks during 2008 to 2012. As a result variations in the interest rate depress the savings and investment and on the other hand it increases the efficiency of banks lending. In the study interest rate was an independent variable and bank profitability was a dependent variable. To examine the impact of interest rate changes on the profitability of commercial banks in Pakistan, Pearson correlation method was used in the study. As a result it was found that there was strong and positive correlation between interest rate and commercial banks profitability. It means if the value of interest rate is increases/decreases then as result value of banks profitability will also increases/decreases.

Ogunbiyi (2014) studied how interest rates affect the profitability of deposit money banks in Nigeria. The study was based on country aggregate level annual data that covered a period of thirteen years 1999 to 2012 and made use of multivariate regression analysis under an econometric framework. The Augmented Dickey and Fuller unit root test results indicate that the series are I (0), I (1) or I (2) stationary. The estimated results show that Maximum lending rate, Real Interest rate and Savings deposit rate have negative and significant effects on the profitability of Nigerian deposit money banks as measured by return on assets at the 5% level of significance. Also, the study found that Real interest rate at the 8% level of significance has negative and significant relationship with Return on Equity of money deposit banks in Nigeria. On the other hand, the study found no significant relationship between interest rate variables and Net Interest Margin of Deposit Money Banks in Nigeria. The implication of the findings of this study suggests that the profitability of the banking sector is a function of changing interest rates.

Selvaraj and Weiss (2014) examined the impact of credit risk on profitability of commercial banks in Ethiopia. For the purpose secondary data collected from 8 sample commercial banks for a 12 year period (2003-2004) were collected from annual reports of respective banks and National Bank of Ethiopia. The data were analyzed using a

descriptive statics and panel data regression model and the result showed that credit risk measures: non-performing loan, loan loss provisions and capital adequacy have a significant impact on the profitability of commercial banks in Ethiopia.

Duraj(2015) investigated the profitability behavior of bank-specific, industry related and macroeconomic determinants from Albania. The primary objective was to investigate the determinants of the profitability and to present all the debates through the literature review on the profitability of these important financial institutions, the banks. An important element of the macro-prudential analysis was the evidence of the internal and external factors and their relationship to the profitability of the banking sector and how this relationship is affected by institutional and structural characteristics. On the other hand internal factors of the banks influencing in the profitability are analyzed. The estimated results suggested that the profitability of Albanian banks is influenced not only by factors related to their management decisions which are classified as internal factors, but also to changes in the external macroeconomic environment example; GDP, inflation which resulted as significantly related to profitability of the banks.

2.4.2 Local Evidence

Onuonga (2014) investigated the effects of internal determinants of profitability on Kenya`s top six commercial banks over the period 2008 to 2013. The study used secondary panel data obtained from the Central Bank of Kenya publications, the Kenya Economic Surveys and World Bank development indicators. The regression analysis was done using the Generalized Least Squares method. The findings revealed that bank size, capital strength, bank operation expenses, ownership, and the ratio of loans to assets are the major significant determinants of the profitability of the top six Kenya commercial banks. The top six commercial banks are still benefiting from economies of scale.

Mwangi (2014) studied whether there was a relationship between interest rates and the financial performance of Deposit Taking Microfinance Institutions in Kenya. The study involved collecting secondary data from Central Bank of Kenya, individual Deposit

Taking Microfinance Institutions and the Association of Microfinance Institutions in Kenya. Consequently data for nine DTMs was analyzed for five years (2009-2013) using multivariate regression model. The study found out that a strong relationship exists between lending interest rates and financial performance of DTMs. To test the significance of the findings, analysis of variance (ANOVA) was done.

Were and Wambua (2014) investigated the determinants of interest rate spread in Kenya's banking sector based on panel data analysis. The findings show that bank-specific factors play a significant role in the determination of interest rate spreads. These include bank size, credit risk as measured by non-performing loans to total loans ratio, return on average assets and operating costs, all of which positively influence interest rate spreads. On the other hand, higher bank liquidity ratio has a negative effect on the spreads. On average, big banks have higher spreads compared to small banks. The impact of macroeconomic factors such as real economic growth is insignificant. The effect of the monetary policy rate is positive but not highly significant. The results largely reflect the structure of the banking industry, in which a few big banks control a significant share of the market.

Wambugu (2014) examined the effect of loan size on the interest rate spread in commercial banks. His study was largely a quantitative research. The study population was drawn from commercial banks currently licensed and trading in Kenya. Since the number of banks was not so large, all the 43 commercial banks were targeted in the study. Secondary data was used in this study which was collected from annual reports of the 43 commercial banks for the 10 year period between 2004 and 2014. The collected data was organized into SPSS and analysed using descriptive analysis, correlation analysis, and regression analysis. The study found that loan size does not influence the interest rate spread of the commercial banks.

Zipporoah and Simba (2015) studied the relationship between the growing investment in technology based bank innovations and bank financial performance in Kenya. The study was based on secondary data which was collected from the published annual reports for commercial banks spanning five years (2009-2013)during which technological innovations have been intensely invested in by banks. There was a slight increase in online banking over the 5 year period and the corresponding increase in financial performance of commercial banks in Kenya over the same period, the study concluded that online banking as a bank innovation has not had the expected level of positive impact on the financial performance of commercial banks in Kenya over the 5 year period.

Simiyu and Ngile (2015) investigated the effect of macroeconomic variables on financial profitability of listed commercial banks in the Nairobi Securities Exchange (NSE) for years 2001 to 2012. Panel data analysis using Fixed Effects model was applied on the data to examine the effects of three major macroeconomic variables which included: Gross Domestic Product (GDP), Exchange rates, and interest rates on profitability of the listed commercial banks. The study findings indicated that real GDP growth rate had positive but insignificant effect to profitability of commercial banks as measured through Return on Assets (ROA). Further, real interest rates had a significant negative influence on profitability of listed commercial banks in Kenya. While the exchange rate had a positive significant effect on the profitability of listed commercial banks on Nairobi Securities Exchange.

2.5 Summary of the Literature Review

From the above empirical reviews it is clear that numerous research works have been done so as to come up with various determinants that affect the profitability of commercial banks world over. Most studies conducted have studied overall banks financial performances no study focusing on lending interest rates and commercial banks financial performance.

Mwangi (2014)studied the effect of lending interest rates on financial performance of deposit taking micro finance institutions in Kenya. None of these studies have examined the effect of lending interest rates on commercial banks financial performance, yet the volatility of lending interest rates in Kenya cannot be overemphasized.

The gaps that exist with regard to empirical review are that these studies were done in different a region which faces different macroeconomic indicators. And as such, there is need to carry out a study on lending interest rates in Kenya in order to come up with findings that will add to the field of academic research in Kenya. This study seeks to bridge those gaps that exist currently.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research methodology that was used to reach out the objectives of the study and the various stages and phases that were followed in completing the study. Further; the chapter describes the study design, the target population, data collection methods and subsequent data analysis in order to produce the desired information for the study.

3.2 Research Design

The research design used descriptive design. Descriptive design according to Polit and Beck (2003), is described as studies that have as their main objective, the accurate portrayal of the characteristics of situations or the frequency with which certain phenomena occur. This method is used because it addresses the objective of the study in investigating the relationship between the variables of the study. 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.

3.3 Target Population

According to Ngechu (2004), a population is a well-defined set of people, services, elements, events, group of things or household that are being investigated. The target population of the study were 43 Commercial Banks in Kenya, which were registered and were in operation as at 31stAugust, 2014 licensed to carry out banking business in Kenya under the banking Act Cap 488.Central Bank is also involved as the industry regulator and therefore has significant influence on the lending interest rates and subsequent operations and strategies of the banks. (See the Appendix).This state that was a census study.

3.4 Data Collection

The secondary data was obtained from the financial reports of the 43 banks in Kenya for period of five years from 2010 to 2014.The reports included audited annual financial statements of commercial banks and supervisory reports obtained from Central bank of Kenya website from 2010 to 2014 regarding banking sector performance as well as prevailing lending interest rates from commercial banks.

3.5 Data Analysis

The collected data was analyzed using regression analysis and SPSS version 2.0.According to Mugenda and Mugenda (2003) stated that data analysis is the process which starts immediately after data collection and ends at the point of interpretation and processing. Therefore, the regression models were used to come up with a model expressing the relationship between the lending interest rates and profitability of commercial banks in Kenya. The results obtained from the model were presented in tables to aid in the analysis after which the inferential statistics will be drawn.

3.5.1 Analytical Model

Regression analysis is used in finding out whether a control variable predicts a given dependent variable, t-statistic were used to determine the relative importance of each control variable in influencing probability. The regression analysis model is shown on equation below;

$Y = \alpha_¡ + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$

Y = Financial Performance which was measured as ROA

X_1= Lending Interest Rate –This is measured as the rate charged by banks on loans to prime customers.

X_2 = Capital Adequacy – This is measured by diving the total equity by the total assets

X_3= Bank size – This is measured as the natural log of total assets.

X_4 = Operating costs – This is measured by dividing the net operating income by the amount of a bank's operating costs.

α_i = value of the intercept

βi = the coefficient of the explanatory i variables which measures the sensitivity of Y changes in i

ε = Error term

3.5.2 Test of Significance

A Pearson coefficient analysis (R) was used in the study to establish the linear relationship that exists between the lending interest rates and profitability of commercial banks. The coefficient of determination (R2) was used to show the percentage for which each independent variable explaining the change in dependent variable. Analysis of variance (ANOVA) was used to test the significance of the model at 95% significance level.

CHAPTER FOUR
DATA ANALYSIS, RESULTS AND INTERPRETATIONS

4.1 Introduction

This chapter presents the data analysis, interpretation and discussion of the research findings. The collected data from secondary sources was analyzed and interpreted in line with the objective of the study which was to determine the effect of lending interest rates on Profitability of commercial banks in Kenya. The chapter is divided into section 4.2 on descriptive statistics, section 4.3 on inferential statistics, section 4.4 on interpretation of the findings.

4.2 Descriptive Statistics

Both descriptive and inferential statistics were employed specifically using regression and ANOVA to establish the significance /fitness of the model and also to establish the link between financial performances with lending interest rate.

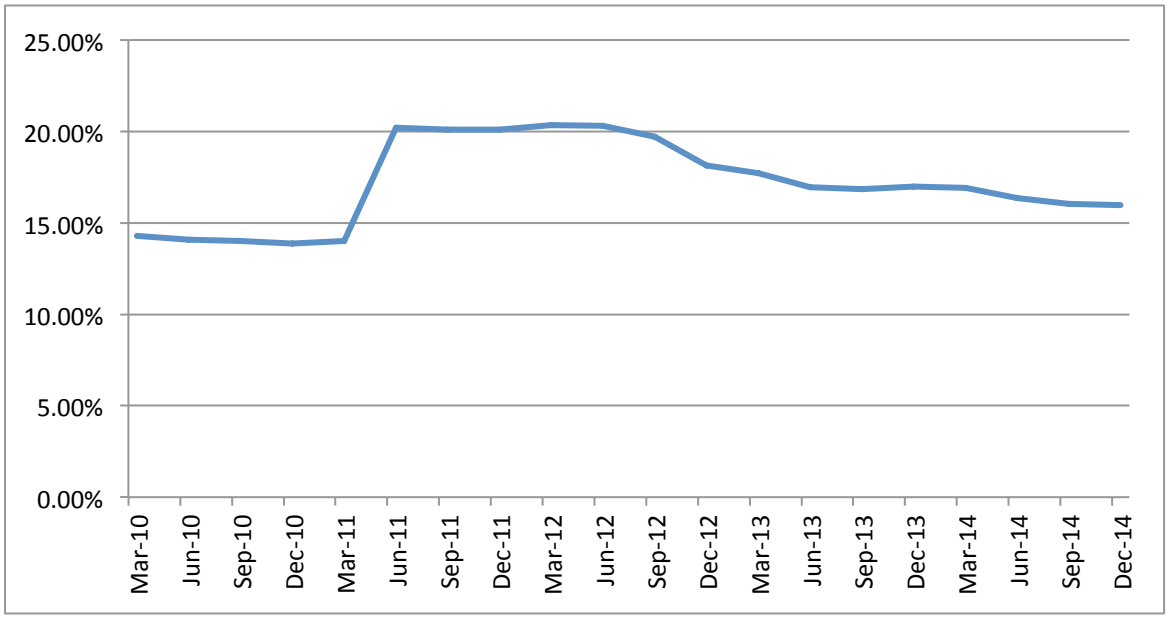
From the results in Table 4.1 below, the analysis of the means shows the following descriptive. Statistics: profitability –ROA (M = 0.026, SD = .029); average lending interest rate (M = 18.50, SD = 2.8); capital adequacy (M = 0.18, SD = 0.16); operation costs (M = 0.59, SD = 0.79) and bank size (M = 24.47, SD = 1.27.The analysis indicates that the bank size has the highest means (M = 24.47), with the deviation from the mean at 127%. The lowest standard deviation for profitability (0.029) indicates that the data are clustered around the mean and thus more reliable.

Table 4.1: Summary of Descriptive Statistics

	ROA	*Average lending interest rate*	*Capital adequacy*	*operating costs*	*Bank size*
Mean	0.026083333	18.4975	0.18010278	0.585536111	24.47223
Standard Error	0.004795723	0.480020399	0.02619725	0.132323207	0.211752
Median	0.03095	18.5	0.15935	0.563	24.4408
Mode	#N/A	18.5	#N/A	#N/A	#N/A
Standard Deviation	0.028774339	2.880122393	0.15718347	0.79393924	1.270512
Sample Variance	0.000827963	8.295105	0.02470664	0.630339517	1.6142
Kurtosis	2.253412527	-0.996242051	30.9599626	2.340643249	-1.26837
Skewness	-1.186857905	0.294692747	5.37716583	-0.12273313	0.118371
Range	0.1423	10.06	0.9919	4.311	4.3724
Minimum	-0.0697	14.35	0.074	-1.8718	22.2826
Maximum	0.0726	24.41	1.0659	2.4392	26.655
Sum	0.939	665.91	6.4837	21.0793	881.0005
Count	36	36	36	36	36

Source: Research Findings

Graph 4.1: Trend Analysis of Commercial Bank lending interest rates movement



Source: Research Findings

As shown in graph 4.1 above, commercial banks lending interest rates in Kenya remained stable from March 2010to March 2011 after which they significantly rose from 14.00% to 20.12% in December 2011, a level that was maintained fairly up to June 2012 after which lending interest rates declined to 18.15% gradually up to 15.99% in December 2014.

Figure 4.1: Comparative Commercial Banks Profitability Year 2010-2014 ROA

Source: Research Findings

As shown in figure 4.1 above, in year 2014, 11.90% of commercial banks had ROA of below 0% which is negative ROA, 47.62% had ROA between 0%-4%, 38.10% had ROA between 4.0% -7.0% and 2.38% had ROA above 7.0%.In year 2013, 7.14% of commercial banks had ROA of below 0% which is negative ROA, 52.38% had ROA between 0%-4 percent, 38.10% had ROA between 4.0% -7.0% and 2.38% had ROA above 7.0%.

In year 2012, 9.52% of commercial banks had ROA of below 0% which is negative ROA, 57.14% had ROA between 0%-4%, 28.57% had ROA between 4.0% -7.0% and 4.76% had ROA above 7.0%.In year 2011, 4.76% of commercial banks had ROA of

below 0% which is negative ROA, 59.52% had ROA between 0%-4 %, 33.33% had ROA between 4.0% -7.0% and 2.38% had ROA above 7.0%.In year 2012, 9.52% of commercial banks had ROA of below 0% which is negative ROA, 40.48% had ROA between 0%-4%, 50.00% had ROA between 4.0% -7.0% and 0.00% had ROA above 7.0%.

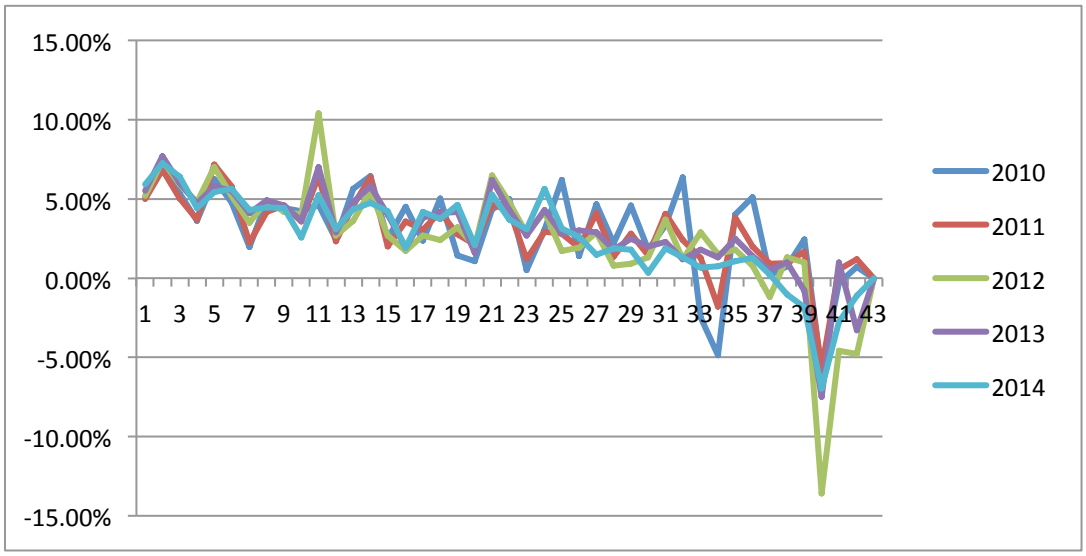
Commercial banks profitability increased betweenyear2010 to 2011 with the number of commercial banks having negative ROA reduce from 9.52% to 4.76% and thereafter in 2012 it increased to 9.52% previously recorded in 2010. In 2013 there was improvement with number of commercial banks having negative ROA reduce from 9.52% in 2012 to 7.14%. In 2014 performance went down with the number of commercial banks with negative ROA increasing to 11.90%from 7.14% recorded in 2013.

Most commercial banks were found to have positive return on assets implying that Kenyan commercial banks have high financial performance. The highest performance was recorded in year 2012 where the best performing commercial bank had a return on assets of 10.4%. The lowest performance was found to be in year 2012 whereby the highest loss made by worst performing commercial bank was -13.60%.

Financial performance of commercial banks improved was between 2010 to 2011 and 2013 to 2014, while decrease was recorded in 2011 to 2012 and 2013 to 2014 this indicates the volatility in the market condition between year 2011 to 2012 and 2013 to 2014. Commercial banks lending interest rates in Kenya remained stable from March 2010 to March 2011 after which they significantly rose from 14.00% to 20.12% in December 2011, a level that was maintained fairly up to June 2012 after which lending interest rates declined to 18.15% gradually up to 15.99% in December 2014.

Graph 4.2: Trend Analysis of Commercial Bank Performance

Profitability of commercial banks from 2010-2014



Source: Research Findings

As shown in graph 4.3 above, most commercial banks are profitable as indicated on the graph since they have positive return on assets. The highest performance was recorded in year 2012 where the best performing commercial bank had a return on assets of 10.4%. Equally the lowest performance recorded on the same year with highest loss being at -13.60%.

4.3 Inferential Statistics

To develop the variables for analytical model discussed in topic three, Microsoft excel was used by applying multiple linear regression technique.

4.3.1 Correlation analysis

After the descriptive analysis, the study conducted Pearson correlation analysis to indicate a linear association between the predicted and explanatory variables or among the latter. It, thus, help in determining the strengths of association in the model, that is, which variable best explained the relationship between lending rate and financial performance as measured ROA.

Table 4.2: Correlation Matrix

	ROA	*ALR*	*CA*	*OC*	*BS*
Return on Asset	1				
Average Lending Rate	-0.165928905	1			
Capital Adequacy	-0.032885129	0.282344456	1		
Operational Costs	0.629251507	-0.376063282	-0.0563606	1	
Bank Size	0.62121024	-0.340635649	-0.2233484	0.295144053	1

Source: Research Findings

From the table 4.6 above Pearson`s correlation between lending interest rates and ROA is -0.17 meaning that there exists perfect Negative relationship between the two variables, Pearson`s correlation between CA and ROA is -0.033 meaning that there exists a negative relationship between the two variables, Pearson`s correlation between CA and Lending interest rates is +0.28 meaning that there exists a positive relationship between the two variables, Pearson`s correlation between operational costs and ROA is +0.63 meaning that there exists a positive relationship between the two variables, Pearson`s correlation between operational costs and lending interest rates is -0.38 meaning that there exists a negative relationship between the two variables, Pearson`s correlation between operational costs and CA is +0.056 meaning that there exists a positive relationship between the two variables, Pearson`s correlation between bank size and ROA is +0.62 meaning that there exists a positive relationship between the two variables, Pearson`s correlation between bank size and lending interest rates -0.34 meaning that there exists a negative relationship between the two variables, Pearson`s correlation

between bank size and CA is +0.22 meaning that there exists a negative relationship between the two variables, Pearson`s correlation between Bank size and operational costs is +0.30 meaning that there exists a positive relationship between the two variables.

Table 4.3: Correlation Statistics

Regression Statistics	
Multiple R	0.804706523
R Square	0.647552588
Adjusted R Square	0.602075503
Standard Error	0.018151215
Observations	36

Source: Research Findings

From the table 4.3 above, the coefficient of multiple determinations (R 2), which indicates the quality of fitness of the model, shows that about 80.5% of the changes in profitability of the banks in Kenya are caused by the combined influence of the independent variables of the bank.

Capital, bank size, operating costs and lending interest rate. With a value of 80.5%, the strong positive relationship between profitability and its determinants is further confirmed.

Adjusted R Square will be used since independent variables are four 0.65implies that the model developed can explain up to 65% of the dependent variable which is financial performance of commercial banks in Kenya.

4.3.2Regression Analysis

The linear regression method used for this study was the least squares method. This was used to determine the line of best fit for the model through minimizing the sum of squares of the distances from the points to the line of best fit.

Table 4.4: Regression Analysis

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	-0.327450818	0.073291603	-4.467780834	9.80922E-05
average lending interest rate	0.002091177	0.001226183	1.705436558	0.098115629
Capital adequacy	0.011063354	0.020628058	0.536325533	0.595561648
operational costs	0.019969466	0.004265033	4.682135729	5.33085E-05
Bank size	0.012306486	0.002648986	4.645734063	5.91386E-05

Source: Research Findings

From table 4.4 above, the model developed from by the study is

Y=-0.33+0.002X1+0.011X2+0.020X3+0.012X4 where Y is financial performance as measured by ROA, X1 is the lending interest rates, X2 is capital adequacy, X3 bank size is measured as natural log of Total assets and X4 is operation efficiency. From the coefficients, the capital adequacy has the highest effect on financial performance of commercial banks.4.3.3 Analysis of variance.

4.3.3 Analysis of Variance

Table 4.5: ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	4	0.018765226	0.004691306	14.23909608	1.05394E-06
Residual	31	0.010213464	0.000329467		
Total	35	0.02897869			

Source: Research Findings

From the ANOVA table 4.5 above, the p value of 0.000001 implies that the relationship is significant at 95% since the p value is less than 0.05. The model developed is also significant for prediction.

4.4 Interpretation of the Findings

The study sought to determine the impact of lending interest rate on bank financial performance in Kenya. The study found that the relationship between lending interest rates and financial performance is positive with a coefficient of correlation of 80.5%.The coefficient of determination of 0.57 implies that interest rates affects 65% of profitability. The ANOVA results show a p value of 0.000001 which is far less than 0.05. This implies that the relationship is significant at 95%. Locally, the findings concur with those of Otuori (2013) who found that higher interest rates offered lenders in an economy a higher return relative to other countries thus attracting foreign capital leading to increase profitability.

Profitability of commercial banks is positively related to lending interest rates, capital adequacy, operation costs and bank size with coefficient of correlation of 80.5%. The coefficient of determination of 0.65implies that the model developed can explain up to 65% of changes in commercial bank profitability. The relationship is significant at 95% confidence level with a p value of 0.000098.

The model developed from by the study is;

Y=-0.33+0.002X1+0.011X2+0.020X3+0.012X4

Where Y is financial performance as measured by ROA, X1 is the lending interest rates, X2 is capital adequacy, X3 bank size is measured as natural log of Total assets and X4 is operation efficiency. From the coefficients, the capital adequacy has the highest effect on financial performance of commercial banks. This implies that for every percentage change in lending interest rates, profitability will change by 0.2%, for every change capital adequacy, profitability will change by 1.1%, for every change bank size, profitability will change by 2.0% and lastly for every change operation costs, profitability will change by 1.2%.

The relationship between profitability and capital adequacy, lending interest rates, bank size and operational costs are positive and statistically significant. The results imply that the banks with larger capital are able to diversify their business operations by strengthening their ability to assume risk and attract funds at low cost, which will enhance their liquidity position. The overall effect will be an improvement of their lending, with positive effect on profitability, (Obamuyi, 2013).

With respect to operational costs, expected increases in bank operation expenses increase (**0.012**) bank profitability of the top Kenyan banks in the sample period. This effect was statistically significant. The result was not consistent with expectation. It was contrary to work of Nsambu (2014).However this result was in agreement with other research findings of Molyneux and Thornton (1992) which found that bank operation expenses are positively associated with high profits. If operational expenses are incurred with a view to increasing bank income then it would lead to improved profitability.

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

The study sought to establish the effect of lending interest rates and financial performance of commercial banks in Kenya. The study used a descriptive research design to achieve the research objectives. Multiple regression analysis was used to determine the relationship between lending interest rates and financial performance measured by return on assets. The study used the return on assets as the dependent variable while lending interest rates, capital adequacy, bank size and operational efficiency was the independent variable.

The study found a significant positive relationship between lending interest rates and financial performance with a coefficient of correlation of 0.65. Commercial bank financial performance was also found to be positively related to lending interest rates and bank size with a coefficient of correlation of 0.805. Over 90% of commercial banks were found to have positive return on assets. The highest performance for the period of study was recorded in year 2012 where the best performing commercial bank had a return on assets of 10.4%. The lowest performance was found to be in year 2009 whereby the highest loss made by worst performing commercial bank was -17.47%.

5.3 Conclusion

The main objective of this study was to determine the effect of lending interest rates on financial performance of commercial banks in Kenya. From the finding above, the study concludes that lending interest rates have significant positive effect on financial performance of commercial banks in Kenya at 95% confidence level. The relationship between lending interest rates and profitable was also found to be linear with increase in lending interest rates leading to higher profitability. The study further concludes that commercial banks in Kenya are profitable with over 95% of commercial banks having positive financial returns. This is shown by the positive ROA.

The study also concludes that lending interest rates, capital adequacy, operational costs have significant effect on ROA. Also the size of commercial banks has effect on profitability of commercial banks where the big commercial banks have higher profitability as they enjoy economies of scale. Finally, the study concludes that the model containing that lending interest rates, capital adequacy, operational costs, and size of commercial bank can explain 80.5% of the changes in commercial banks profitability.

5.4 Policy Recommendation

Based on the study findings, the study makes a number of recommendations to be considered for policy formulations. First, commercial banks lending rates have positive effect on commercial banks profitability. This is because higher lending rate implies more revenues to the commercial banks which may not be crowded out by reduced demand for loans. This implies that the demand for loans in Kenya is inelastic and hence insensitive to changes in price for money (interest rates). To cushion consumers from exploitation by commercial banks, the Central Bank need exercise their monitoring roles strictly and discipline any commercial banks that may be increasing the interest rates arbitrary.

Further, policies need to be put in place to shield bank lending rates and ensure monitoring the same. In addition, in times of poor performance of commercial banks and the need to boost their profitability may be necessary for their role in economy, Central Bank of Kenya should come up with monetary policy that will lead to rise in interest rates and hence improving banks profitability.

The management of commercial banks also need to develop polices and investment sources that diversify income .Diversifying the commercial banks source of profitability from the over reliance on the interest rates related sources and explore on other avenues of achieving high profitability will be vital. In addition, the management of small and medium sized. Banks need to develop ways of ensuring that their banks grow to large banks since increase in bank size positively affects profitability.

5.5 Limitations of the Study

The study was faced by a number of limitations. First, only 36 published accounts for commercial banks were used in the study which was 83.7% of the banking sector in Kenya. Secondly, this study made use of return on assets as measure of financial performance. There are other measures of financial performance including return on equity (ROE), Return on Deposits (ROD), Return on investment (ROI), return on capital employed (ROCE) among others. Thirdly, the study relied on secondary data which had already been compiled by the Central Bank of Kenya as well published commercial banks financial statements. Data was used just as obtained without any adjustments and the researcher had no means of verifying for 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. Lastly, the study was specific to Kenya and therefore suffers from the limitations of country specific studies thus cannot be generalized to banks in other countries other than Kenya.

5.6 Suggestions for Further Research

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 lending interest rate is the main determinant of commercial banks profitability since they trade in money. Further research can therefore be done incorporating other determinants of commercial banks profitability and not only interest.

Further research should be done in different country to enable generalization of the findings. In addition, some study can be carried out using data from commercial banks as opposed to data availability from Central Bank of Kenya. This will improve the reliability of the financial information. Further study can be done on other financial institutions. Lastly, the need for carryout another study in the banking industry that makes use of other control variables in order to show the impact of lending interest rate on bank performance not bank size, capital adequacy, and operating costs cannot be overemphasized.

REFERENCES

Aburime, T.U. (2008) "Determinants of Bank Profitability: Macroeconomics Evidence from Nigeria". *Lagos Journal of Banking, Finance and Economics.*

Albertazzi U. and Gambacorta L. (2006), "Bank Profitability and Taxation", mimeo, Bancad Italia.

Athansasaglou, (2006)."Bank-specific, Industry-specific and Macroeconomic. Determinants of Bank Profitability" .*Journal of International Financial Markets, Institutions and Money.*

Athanasoglou, P.P., Brissimis, S N. & Delis, M. D. (2005). Bank-specific, Industry Specific and Macroeconomic Determinants of Bank Profitability. *MPRA Paper, No.153*.

Auerabach, D. R. (1988).Money banking and financial markets.3rd Edition, Maxwell

Macmillan International Edition.

Baum, F., Mustafa, C., & Neslihan, O., (2009). The Second Moments Matter: The Impact of Macroeconomic Uncertainty on the Allocation of Loanable Funds. *Economics Letters*.

Bubna, Amit and Chowdhry, Bhagwan (2010), "Franchising Microfinance", Review of Finance, Vol. 14, No. 3, pp. 451-476

CBK annual Report, 2013/2014 at

CBK annual Report, 2012/2013 at http://www.centralbank.go.ke

CBK annual Report, 2011/2012 at http://www.centralbank.go.ke

CBK annual Report, 2010/2011 at http://www.centralbank.go.ke

Coleman, S. (2007). "The role of human and financial capital in the profitability and growth of Women-owned small firms," *Journal of Small Business Management, 45, 303-319*.

Devereux, M. and J. Yetman (2002), - Price setting and exchange rate pas through: Theory and evidence. *In the book Price Adjustment and Monetary Policy, pp. 347-371, a compendium published following the eponymous conference held at the Bank of Canada, November 2002. Ottawa: Bank of Canada*

Desmukh S. (1983). *Interest Rate Risk Management for Commercial Banks.*

Duraj, B., (2015)**.** Factors Influencing the Bank Profitability – Empirical Evidence from Albania. *Asian Economic and Financial Review, 2015, 5(3):483-494*

Flamini, V., McDonald , C., & Schumacher ,L. (2009) . The determinants of Commercial Bank Profitability in Sub-Saharan Africa.*IMF Working Paper WP/09/15*.

Froyen, R. (1996).Macroeconomics: Theories and Policies.5thEdition. *New Jersey: Prentice Hall Publishers.*

Infotrak – COFEK (2011). "*The Infotrak COFEK July Poll on the Banking Sector."*

Kamau, A. W. (2009). Efficiency and productivity in the banking sector in Kenya. *Doctoral thesis, University of Nairobi, 2009.*

Reilly, F. K., Norton, E. A., (2006) Investments, 7th edition, Thomas South-Western, United States.

Keynes, J.M. (1936). "The General Theory of Employment, Interest Rate and Money. "*Harcourt Publishers*

Kisaka, E. S. (1999) "The Causal relationship between exchange rates and stock prices in Kenya" *Unpublished dissertation, Faculty of Commerce, University of Nairobi*.

Khani, W., & Sattar, A., (2014).Impact of Interest Rate Changes on the Profitability of Four Major Commercial Banks in Pakistan. *International Journal of Accounting and Finance Reporting* Vol.4, No.1, 2014.

Khrawish, H. A. (2011). Determinants of Commercial Banks Performance: *Evidence from Jordan. International Research Journal of Finance and Economics, 81, 148-159.*

McKinnon, I. R. (1973). Money and capital in economic development (pp. 8–9). Brooking Institution Press.

Molyneux, P & Thrnston, J. (1992).Determinants of European bank profitability: A note, Journal of Banking and Finance, 16(6) 1173-1178.

Moore, B. J., (1988). The endogenous money supply. *Journal of Post Keynesian Economics: 10 (3): 372- 385.*

Mugenda O.M. & Mugenda A.G. (2003). Research Methods Quantitative and qualitative approaches. *Nairobi: Acts Press.*

Musumeno Isaac (2001). Understanding Organization Performance, Doing Business Today. *The Manufacturer Journal, Vol. 5.*

Mwangi, S., (.2014).The Effect of Lending Interest Rates on Financial Performance of Deposit Taking Micro Finance Institutions in Kenya**.***MBA Project, University of Nairobi.*

Nathan, L. (1999). Borrowers beware: Equity strippers are preying on elderly homeowners. Communities and Banking Federal Reserve Bank of Boston

Naude, W. (1995). Financial liberation and interest rate risk management in sub-Saharan Africa. *Oxford Centre for the Study of African Economics. University of Oxford*

Nsambu K.F. (2014) . Factors affecting performance of commercial Banks in Uganda: a case for domestic commercial banks. *Proceedings of 25 the international Business Research Conference 13-14 Jan,2014*.

Ngechu. M. (2004). Understanding the research process and methods.An introduction to research methods. Acts Press, Nairobi.

Ngugi, R. (2004). "Determinants of Interest Spread in Kenya." Nairobi, Kenya: *Kenya Institute for Public Policy Research and Analysis.*

Njuguna, S.N., & Ngugi R.W., (2000)."Banking Sector Interest Rate Spread in Kenya."*Macroeconomic and Econometric Modeling. Kenya Institute for Public Policy.*

Obamuyi, T. M. (2013). An analysis of the deposits and lending behaviours of banks in Nigeria. *International Journal of Engineering and Management Sciences, 46–54.*

Ogunbiyi, S., (2014).Interest Rates and Deposit Money Banks' Profitability Nexus: The Nigerian experience. *Arabian Journal of Business and Management Review (OMAN Chapter) Vol. 3, No.11; June. 2014*

Oloo, O. (2009). The Banking Survey 2009. Think Business. Nairobi

Oloo, O. (2010). Banking Survey Report, The best banks this decade 2000-2009 , Think Business Limited, Kenya, www.bankingsurvey.co.ke

Ommeren, S.Van., (2011). Examination of Determination of Bank Profitability in the European Banking Sector

Onuonga, S., (2014). The Analysis of Profitability of Kenya`s Top Six Commercial Banks in Kenya. *American International Journal of Science Issues*, Vol.3,No.5 October2014.

Onyekachi, R. & Okoye, V. (2013). "*Effect of Bank Lending Rate on the Performance of Nigerian Deposit Money Banks*," Unpublished Research Project, Ebonyi State University, Nigeria.

Pandey, I.M., (1997). Financial Management, Vikas Publishing, 7th Ed., New Deihi.

Polit, D. & Beck, C. (2003).Nursing Research: Principles & Methods. (7thed). Canada: Lippincott.

Rasiah, D. (2010). Theoretical Framework of Profitability as Applied to Commercial Banks in Malaysia. *European Journal of Economics, Finance and Administrative Sciences, 19, 74 – 97.*

Russell, Steven. (1992). Understanding the term structure of interest rates: the expectations theory. *Federal Reserve Bank of St. Louis, Review 74 (July): 36-50.*

Selvaraj, M. & Weiss, A. (2014).The Impact of Credit Risk on Profitability Performance of Commercial Banks in Ethiopia. *African Journal of Business ManagementVol.9 (2) pp 59-66 28January 2015.*

Simba, D., (2013). "The Relationship between Borrowing Interest Rates and Nonperforming Loans in Deposit Taking Micro Finance Institutions in Kenya."*Un-published MBA project, University of Nairobi, Kenya.*

Simiyu, C.N., & Ngile, L., (2015). Effect of Macroeconomic Variables on Profitability of Commercial Banks Listed in The Nairobi Securities Exchange. *International Journal of Economics, Commerce and Management Vol.3, Issue 4, April 2015.*

Thygerson, K. J. (1995). Management of Financial Institutions. New York, Harper Collins.39

Wambugu, B.N., (2014).The Effect of Loan Size on Interest Rate Spread in Commercial Banks in Kenya.*MBA Project, University of Nairobi*

Were, M., & Wambua, A., (2014). "What Factors Drive Interest Rate Spread of Commercial Banks? Empirical evidence from Kenya."*Review of Development Finance,* Vol. 4, Issue 2, December 2014.

Zipporah, A. & Simba, D. (2015). "Relationship between Bank Innovation and Financial Performance of Commercial Banks in Kenya". *International Journal of Education and Research Issues*, Vol. 3, No. 5, May 2015.

APPENDICES

Appendix I: List of 43 Commercial Banks in Kenya as at 30th August, 2014.

1. African Banking Corporation
2. Bank of Africa Ltd
3. Bank of Baroda (Kenya) Ltd
4. Bank of India
5. Barclays Bank of Kenya Ltd
6. CFC Stanbic Bank
7. Chase Bank (Kenya) Ltd
8. Credit Bank Ltd
9. Citibank
10. Commercial Bank of Africa Ltd
11. Consolidated Bank of Kenya Ltd
12. Co-operative Bank of Kenya Ltd
13. Development Bank of Kenya Ltd
14. Diamond Trust Bank
15. Dubai Bank Kenya Ltd
16. Ecobank
17. Equitorial Commercial Bank
18. Equity Bank
19. Family Bank
20. Fidelity Commercial Bank Ltd
21. Fina Bank
22. First Community Bank Ltd
23. Giro Bank Ltd
24. Guardian Bank Ltd
25. Gulf African Bank
26. Habib Bank Ltd
27. Habib Bank A.G. Zurich
28. Housing Finance

29. I&M Bank Ltd
30. Imperial Bank Ltd
31. Jamii Bora Bank
32. Kenya Commercial Bank Ltd
33. K-Rep Bank
34. Middle East Bank Kenya Ltd
35. National Bank of Kenya Ltd
36. NIC Bank
37. Oriental Commercial Bank
38. Paramount University Bank
39. Prime Bank Limited
40. Standard Chartered Kenya Ltd
41. Trans National Bank Kenya Ltd
42. UBA Kenya Ltd
43. Victoria Commercial Bank Ltd

Source: CBK Website (August 2014)

Appendix II: Commercial Banks Roa for Year 2010 To 2014

		2010	2011	2012	2013	2014
1	African Banking Corporation	4.67%	4.12%	2.90%	2.90%	1.49%
2	Bank of Africa Ltd	1.81%	1.43%	1.30%	2.00%	0.33%
3	Bank of Baroda(Kenya)Ltd	5.65%	4.57%	3.60%	4.80%	4.35%
4	Bank of India	5.04%	4.18%	2.40%	4.10%	3.74%
5	Barclays Bank of Kenya Ltd	6.24%	7.18%	7.00%	5.80%	5.44%
6	CFC Stanbic Bank	1.96%	2.23%	3.50%	4.10%	4.31%
7	Chase Bank (Kenya) Ltd	2.45%	2.23%	2.70%	2.90%	3.08%
8	Credit Bank Ltd	0.74%	0.95%	1.30%	1.00%	-1.02%
9	Citibank	4.64%	6.43%	10.40%	7.00%	5.22%
10	Commercial Bank of Africa Ltd	4.24%	3.58%	4.00%	3.60%	2.57%
11	Consolidated Bank of Kenya Ltd	2.46%	1.68%	1.00%	-0.80%	-1.82%
12	Co-operative Bank of Kenya Ltd	3.16%	3.68%	4.80%	4.70%	4.43%
13	Development Bank of Kenya Ltd	2.22%	1.37%	0.80%	1.80%	1.88%
14	Diamond Trust Bank	4.90%	4.19%	4.90%	4.90%	4.47%
15	Dubai Bank Kenya Ltd	0.18%	0.90%	-1.20%	0.50%	0.21%
16	Ecobank	0.70%	1.20%	-4.80%	-3.30%	-1.09%
17	Equatorial Commercial Bank	-0.32%	0.55%	-4.60%	1.00%	-2.78%
18	Equity Bank	6.95%	6.84%	7.40%	7.70%	7.26%
19	Family Bank	2.48%	2.01%	2.70%	4.00%	4.24%
20	Fidelity Commercial Bank Ltd	4.59%	2.79%	0.90%	2.50%	1.80%
21	Fina Bank	1.07%	2.21%	2.00%	1.60%	2.08%
22	First Community Bank Ltd	-2.50%	1.28%	2.90%	1.80%	0.67%
23	Giro Bank Ltd	6.20%	2.79%	1.70%	2.80%	3.13%
24	Gurdian Bank Ltd	1.39%	1.92%	1.90%	3.00%	2.59%

25	Gulf African Bank	0.49%	1.20%	2.80%	2.70%	3.11%
26	Habib Bank Ltd	3.05%	2.19%	4.20%	4.30%	5.63%
27	Habib Bank A.G. Zurich	4.34%	4.62%	6.50%	6.20%	5.29%
28	Housing Finance	4.20%	5.20%	5.90%	6.42%	6.95%
29	I & M Bank Ltd	4.80%	5.80%	5.20%	5.50%	5.64%
30	Imperial Bank Ltd	6.43%	6.37%	5.50%	5.80%	4.75%
31	Jamii Bora Bank	-4.85%	-1.79%	1.50%	1.30%	0.73%
32	Kenya Commercial Bank Ltd	5.15%	4.98%	5.20%	5.50%	5.93%
33	K-Rep Bank	1.44%	2.78%	3.20%	4.20%	4.61%
34	Middle East Bank Kenya Ltd	5.11%	1.99%	0.80%	1.40%	1.28%
35	National Bank of Kenya Ltd	4.49%	3.56%	1.70%	1.90%	1.90%
36	NIC Bank	4.41%	4.57%	4.20%	4.60%	4.44%
37	Oriental Commercial Bank	4.01%	3.83%	1.80%	2.50%	0.21%
38	Paramount University Bank	6.35%	2.39%	1.20%	1.20%	1.32%
39	Prime Bank Ltd	2.37%	3.07%	2.70%	3.80%	4.18%
40	Standard Chartered Bank Ltd	5.37%	5.03%	5.90%	6.00%	6.42%
41	Trans National Bank Kenya Ltd	3.33%	4.05%	3.70%	2.30%	1.86%
42	UBA Kenya Ltd	-5.85%	-5.72%	-13.60%	-7.50%	-6.97%
43	Victoria Commercial Bank Ltd	5.00%	4.31%	4.80%	4.30%	3.68%

Source: Central Bank (December 2014)

APPENDIX II1: RAW DATA for year 2014

		ROA	Average Lending Rate(%)	Capital Adequacy	Operational Costs	Bank Size	T A Ksh'000'
1	African Banking Corporation	3.02%	15.5	0.163	0.8175	24.105	10,300,239
2	Bank of Africa Ltd	0.33%	19.7	0.1241	0.0667	24.688	52,683,299
3	Bank of Baroda(Kenya)Ltd	4.35%	15.2	0.1593	2.3649	24.849	61,944,650
4	Bank of India	3.74%	18.2	0.1656	2.4392	24.148	30,721,440
5	Barclays Bank of Kenya Ltd	5.44%	21.41	0.1689	0.7686	26.144	226,118,124
6	CFC Stanbic Bank	4.31%	15.58	0.2038	0.9094	25.922	180,998,985
7	Chase Bank (Kenya) Ltd	3.08%	18.5	0.1033	0.5049	25.397	107,112,469
8	Credit Bank Ltd	-1.02%	19	0.1299	-0.1374	22.905	8,864,537
9	Citibank	1.00%	15	0.1408	0.2691	24.543	13,857,936
10	Commercial Bank of Africa Ltd	2.57%	15.55	0.0937	0.6732	26.008	197,463,704
11	Consolidated Bank of Kenya Ltd	-1.82%	21.41	0.074	-0.2332	23.543	16,778,631
12	Co-operative Bank of Kenya Ltd	4.43%	15.43	0.1498	0.6633	26.368	282,686,098
13	Development Bank of Kenya Ltd	1.88%	23.2	0.163	0.8175	23.553	16,954,227
14	Diamond Trust Bank	4.47%	15.2	0.1525	1.36	26.078	211,539,412
15	Dubai Bank Kenya Ltd	0.63%	20	0.1606	0.2078	24.734	20,683,778
16	Ecobank	-1.09%	21.5	0.1704	-1.8718	24.55	45,934,458
17	Equatorial Commercial Bank	-2.78%	20.5	0.0919	-0.308	24.332	36,907,136
18	Equity Bank	7.26%	21	0.1439	0.9033	26.34	276,115,727
19	Family Bank	4.24%	14.62	0.1718	0.5325	24.847	61,812,663
20	Fidelity Commercial Bank Ltd	1.80%	22.7	0.1094	0.343	23.4866	15,852,985
21	Fina Bank	1.28%	19	0.074	0.2691	22.785	30,917,812
22	First Community Bank Ltd	0.67%	17.9	0.0993	0.0782	23.449	15,278,026
23	Giro Bank Ltd	3.13%	20.77	0.1606	1.0447	23.437	15,082,199
24	Gurdian Bank Ltd	2.59%	20.77	0.1204	0.5935	23.402	14,572,873
25	Gulf African Bank	3.11%	20.77	0.1606	1.0447	23.437	15,082,199
26	Habib Bank Ltd	2.57%	16.12	0.2038	1.8536	23.644	60,118,412
27	Habib Bank A.G.Zurich	5.29%	16.53	0.1714	0.7916	23.135	11,152,222
28	Housing Finance	2.08%	19.55	0.2172	0.5965	24.22	32,991,626
29	I & M Bank Ltd	5.64%	15.59	0.1589	1.8536	25.645	137,299,354
30	Imperial Bank Ltd	4.75%	15.4	0.132	0.7404	24.759	56,599,361
31	Jamii Bora Bank	0.73%	20.41	0.2367	0.1322	23.297	13,117,892
32	Kenya Commercial Bank Ltd	5.93%	18.9	0.1914	0.472	26.655	376,969,401
33	K-Rep Bank	4.61%	24.41	0.1539	0.3275	23.483	15,801,438

34	Middle East Bank Kenya Ltd	1.28%	19	0.2078	0.2691	22.504	5,936,601
35	National Bank of Kenya Ltd	1.90%	14.9	0.0986	0.1154	25.534	122,864,886
36	NIC Bank	4.44%	16.12	0.1697	1.58474	25.643	137,087,464
37	Oriental Commercial Bank	1.07%	18.21	0.2032	0.2159	22.785	7,857,515
38	Paramount University Bank	2.59%	16	0.163	0.5935	23.05	9,864,85
39	Prime Bank Ltd	4.18%	16.5	0.1408	1.3945	24.729	54,917,674
40	Standard Chartered Bank Ltd	6.42%	18.5	0.1817	0.2274	26.129	222,635,993
41	Trans National Bank Kenya Ltd	1.86%	23.8	1.0659	0.2474	23.05	10,239,922
42	UBA Kenya Ltd	-6.97%	15.6	0.2395	-0.4884	22.283	4,755,787
43	Victoria Commercial Bank Ltd	1.75%	21.6	0.171	0.4854	23.549	12,934,756

Source: Central Bank (December 2014)