

**THE EFFECT OF MONETARY POLICY ON COMMERCIAL BANKS
LENDING RATES IN KENYA**

BY:

HENRY M. KAMAU

D61/76411/2012

**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER
OF BUSINESS ADMINISTRATION, UNIVERSITY OF NAIROBI**

OCTOBER, 2015

DECLARATION

I, the undersigned declare that this research project is my original work and that it has not been presented in any other institution for academic purposes.

Signed.....Date.....

Kamau Henry Mwangi

D61/76411/2012

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

Signed..... Date.....

PROF. JOSIAH ADUDA

Lecturer,

Department of Finance and Accounting,

School of business

University of Nairobi

DEDICATION

I would like to dedicate this research paper to my lovely wife Elizah Mwangi, our charming two sons; Ramsey Kamau and Jayden Davis (My gift to you). My dad, John Kamau and Mum, Elenah Kamau, my parents in-laws Kavalia, Malia and Family, all my brothers, sister and their families; Carol, Mike, Ngash, Githinji, Bonie and Peter for your innumerable support and incessant prayers during the entire MBA program.

ACKNOWLEDGEMENTS

The successful completion of this project was profoundly necessitated by unrelenting supporters whom I wish to acknowledge.

Firstly, special thanks to Almighty Father for your grace and favors, sincere acknowledgement to my supervisor, Prof. Aduda for his rich knowledge and guidance. I will forever be grateful to my Dad for his persistence encouragement to study further since my tender age. I also acknowledge my relatives, friends, work mates and classmates whose remarkable devotion and dedication throughout my study was incredible. May the God's grace be upon you always!

LIST OF TABLES

Table 4. 1: Model Summary	34
Table 4. 2: Coefficients.....	35

LIST OF FIGURES

Figure 4. 1: Lending rates.....	30
Figure 4. 2: Repo rate.....	31
Figure 4. 3: 91 Day Treasury Bill	32
Figure 4. 4:Cash Reserve Requirements	33
Figure 4. 5: Central Bank Rate	34

ABBREVIATIONS

BOP	Balance of Payment
CAP	Chapter
CB	Commercial Bank
CBK	Central Bank of Kenya
CBR	Central Bank Rate
CRR	Cash Reserve Ratio
GDP	Gross Domestic Product
IMF	International Monetary Fund
LIBOR	London Inter-Bank Offered Rate
MPC	Monetary Policy Committee
NBFI	Non-Banks Financial Institution
OMO	Open Market Operations
REPO	Repurchase Agreement
TAD	Term Deposit Auction

TABLE OF CONTENTS

DECLARATION	ii
DEDICATION	iii
ACKNOWLEDGEMENTS	iv
LIST OF TABLES	v
LIST OF FIGURES	vi
ABBREVIATIONS	vii
TABLE OF CONTENTS	viii
ABSTRACT	xi
CHAPTER ONE	1
INTRODUCTION	1
1.1 Background to the Study.....	1
1.1.1 Monetary Policy	2
1.1.2 Commercial Bank Lending Rates	8
1.1.3 Relationship between Monetary Policy and Lending Rate	9
1.1.4 Monetary Policy and Lending Rates in Kenya	10
1.2 Research Problem	11
1.3 Research Objective	14
1.4 Value of the Study	14
CHAPTER TWO	15
LITERATURE REVIEW	15

2.1 Introduction.....	15
2.2 Review of Theories	15
2.2.1 Keynesian theory	15
2.2.2 Loanable Funds Theory	17
2.2.3 Liquidity Preference Theory	18
2.2.4 Loan Pricing Theory	20
2.3 Determinants of Lending Rates.....	21
2.4 Empirical Literature Review.....	22
2.5 Summary of the Literature Review.....	25
CHAPTER THREE	26
RESEARCH METHODOLOGY	26
3.1 Introduction.....	26
3.2 Research Design.....	26
3.3 Population and Sample of the Study	26
3.4 Data Collection	27
3.5 Data Analysis	27
CHAPTER FOUR.....	29
DATA ANALYSIS PRESENTATION AND FINDINGS	29
4.1 Introduction.....	29
4.2 Data presentation	29
4.2.1 Lending rates.....	29

4.2.2 Repo rate	30
4.2.3 91-Day Treasury Bill	31
4.2.4 Cash Reserve Requirement	32
4.2.5 Central Bank Rate	33
4.3 Regression Analysis.....	34
4.4 Summary and interpretation of findings	36
CHAPTER FIVE	39
SUMMARY CONCLUSIONS AND RECOMMENDATIONS	39
5.1 Summary	39
5.2 Conclusions.....	40
5.3 Recommendations to Policy and Practice.....	41
5.4 Limitations of the Study.....	42
5.5 Suggestions for Further Research	44
REFERENCES.....	45
APPENDICES	49
Appendix I: Lending Rates	49
Appendix II: REPO Rate	49
Appendix III: 91-Day Treasury Bill Rate	50
Appendix IV: Cash Reserve Requirement.....	50
Appendix V: Central Bank Rate	51

ABSTRACT

One of the most prevalent and common condemnation directed at the Central Bank of Kenya has been its inept to force commercial banks to reduce their lending rates. The biggest challenge Kenya is facing is the persistent increase in lending rate where the cost of borrowing has been rising incessantly. This has a negative effect on investment because the higher cost of borrowing discourages investors from borrowing capital, it also has a negative effect on commercial banks profitability and propagate rise in non-performing loans. The research objective was to assess the impact of monetary policy on commercial banks lending rates in Kenya. The study adopted a quantitative design. The population of interest in the study consisted of 44 banking institutions (43 commercial banks and 1 mortgage finance company). The study was based wholly on secondary data obtained from Central Bank of Kenya. The researcher conducted a multiple regression analysis in order to study the relationship between monetary policies and lending rate in Kenya. The research findings established that there is a strong positive relationship between CBR rate and bank's lending rates. The study concludes that the Central Bank rate is the main influencer of lending rates in the study period followed by the 91 Day Treasury bill and the Repo rate. However, the Cash Reserve Requirement has a negative relationship with the prevailing lending rates. The study recommends that the Central Bank of Kenya should lower the Central Bank Rate since it would lead to a decrement in the lending rates. Before making any adjustments in the current monetary rates, the concerned authorities in this case the Central Bank should adequately assess the influence of their monetary tools on current money supply in the economy.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Before liberalization, Commercial banks adopted interest rates issued by the regulator (Central Bank of Kenya). Many of the economies relied on the government as a source of discipline for economic agents (Bandiera et al., 1999). With the advent of financial liberalization in 1990s, commercial banks were faced with challenges of setting rates. As (Bandiera at al, 1999) noted, the wave of liberalization in most developing countries in the 1980s was characterized by more attention given to market forces in allocating credit through freely determined interest rates.

In Kenya the wave of financial liberalization led to a problem of unpredictability and uncertainty on the incidence of the future rate of interest to be charged on loans by players in the sector. Volatile fluctuation in interest rates and unpredictability on the incidence of the next rate of interest led to unpredictability in various macro-economic variables like investment, savings, output employment aggregate demand and consumption in the economy. A poor monetary policy or lack of it, may impact on the supply of loan. For example, if following a monetary policy tightening, certain banks face balance sheet constraints, such as lower liquidity, and then commercial banks may restraint lending

One of the most prevalent and common condemnation directed at the Central Bank of Kenya has been its inept to force commercial banks to reduce their lending rates. The general public complains that while banks offer low rates on savings, they are charging high lending rate which looks inordinate. As such the public wants the

Central Bank of Kenya to lower lending rates so that they can cheaply borrow. Kahn (2010), observes that monetary policy objectives are concerned with the management of multiple monetary targets among them price stability, promotion of growth, achieving full employment, smoothing the business cycle, preventing financial crises, stabilizing long-term interest rates and real exchange rate.

1.1.1 Monetary Policy

Having been established in 1966 under Central Bank Act (CAP 481), The Central Bank of Kenya (CBK) has been entrusted with the responsibility of formulating and implementing monetary policy directed at achieving and maintaining stability in the general level of prices, to foster the liquidity, solvency and proper functioning of a stable market based financial system and to maintain a sound market based financial system (CBK Act, 2010).

Monetary policy is a process or mechanism by which a country's regulatory body or authority influences the supply of money which in turn influence interest rates. This is aimed at creating stability and promoting economic growth. Monetary policies can either be contractionary, aimed at decreasing the supply of money, or expansionary, aimed at increasing the amount of currency in circulation. Monetary policy refers to the combination of measures designed to regulate the value, supply and cost of money in an economy. It can be described as the art of controlling the direction and movement of credit facilities in pursuance of stable price and economy growth in an economy (Chowdhury, Hoffman and Schabert, 2003). Expansionary policies are aimed at stimulating economic growth during recession by lowering interest rates thereby enticing borrowers to take up cheaper credit and invest. Contractionary

policies on the other hand, are majorly intended at slowing inflation to avoid deterioration of asset values. There are several instruments or tools used by central banks to implement policy of choice. The three major tools used across many countries are the Central Bank Rate (CBR), Open market operation (OMO) and reserve requirement.

The monetary policy committee is the organ of the Central Bank of Kenya responsible for formulating monetary policy. During the first decade after independence, the Kenyan government did not actively impose monetary policies; rather it stamped its legitimacy by merely being a lender of last resort to commercial banks. Almost all economic activities including the bank sector were covered by general and widespread controls. Hence, monetary policy was used only sparingly as a tool of economic management. No intervention was necessary in an environment of 8% GDP growth and below 2% inflation rate. The government mainly relied on direct controls, setting limits on the amount of credit that financial institution could lend. The CBK also relied on moral suasion, enlisting support from commercial banks through regular meeting to explain the thrust moral policy initiatives. Eventually the government was forced to come up fiscal and monetary policies to restrain rising inflation and stunted economic growth (Kinyua, 2000).

According to economic surveys (1966- 2010), CBK pursued a rather passive monetary policy during 1966 to 1970 this is partly because the bank had not even acquired sufficient experience in the management of monetary policy and because the Kenyan economy had no serious macroeconomic problems to cope with during this period. The economy grew at rate around 8 percent annually while inflation remained

below 2 percent apart from 1967 and 1969, both the country's balance of payments and budget recorded substantial surpluses during this period. The bank focused on laying down the necessary infrastructure for effective management of monetary policy. It consolidated its role as the major holder of foreign exchange following the centralization of the custody of foreign exchanges with the bank in 1967. In the same year it introduced liquidity ratio. Kenya entered the second decade of independence, during the 1970- 1980; with major difficulties that threatened her ability to sustain the commendable 6-8 percent annual growth rate that the country enjoyed in the 1960's. The country had to antagonize emerging and severe constraint on the balance of payment. Particularly following the collapse of the Bretton woods system of fixed exchange rates in the 1971- 1975, and the Balance of Payments (BOP) and domestic prices came under snowballing pressure. After consecutive surpluses over the previous 3 years to 1970, the overall BOP moved into a deficit of 362 million in 1971 and inflation climbed to 7% from 2.6% in 1966. These adverse developments were largely attributed to expansion in domestic credit that had occurred in the previous 2 years and resulted in a much higher imports in 1970-1971. The reduction in net capital inflows also backed the weakening of the BOP in 1971.

The Bank took series of measures aimed at containing credit expansion and at helping to restraint imports. These measures included the imposition of a minimum cash ratio of 5% put in place in 1969. The cash ratio was however removed and liquidity ratio was raised to 15% in February 1972. Commercial banks and non- banks financial institutions (NBFI's) were also instructed by CBK to reduce their lending for financing imported consumer durable goods by specified amount between July and

October 1971. The shilling exchange rate was also devalued following the devaluation of US dollar.

CBK's monetary policy has two pillars: the first is monetary programme that assign a prominent role to monetary aggregates, as reflected by the announcement of targets for the growth of M3 and its components. The second pillar is the Central Bank Rate (CBR), introduced in June, 2006, in accordance with Section 36(4) of the CBK Act, to signal the stance of monetary policy. The CBR is defined as the lowest rate at which the CBK charges on loan it extends to commercial banks as the lender of last resort. Before the introduction of CBR, the bank rate was 3 percent above the T-bill rate which was in use since 2000. The central bank has been utilizing modest monetary policy regime since the liberalization of the economy in the 1990's Maturu et al., (2011).

The CBR is operationalized through the OMO once the MPC meets and decides what action to take either to increase the CBR in the case of restrictive monetary policy and decreasing the CBR in the case of expansionary monetary policy. The dealer at CBK will issue repo to reduce the amount in circulation and reverse repo to increase the amount of money in circulation. Depending on the targeted amount the repo rate will rise and fall. To attract more funds the dealer will offer better rates to the bank resulting in higher repo rates and vice-versa. The relationship between the repo rate and CBR should be very direct, however the researcher appreciated that it is difficult to establish causality with the CBR because it does not change daily like the other rates (CBK, 2012).

The open market operations (OMO) are the main instruments used to manage liquidity situation and to steer interest rates according to the monetary policy stance, namely;- Repurchase Agreement (REPO), Treasury Bills and Cash Reserve Ratio (CRR). OMO is mainly conducted in the form of REPOs and Reverse REPOs. Under REPO, the CBK agrees to sell government securities to commercial banks at agreed interest rates (repo rate) for a specified period of (currently 7 days) with an understanding that CBK will repurchase the securities from the commercial banks at the end of period thus mopping liquidity from the banking system. Under Reverse repo, the CBK agrees to purchase government securities from commercial banks at agreed interest rates (Reverse repo) for a specified period with an understanding CBK will resell the securities to commercial banks at the end of period hence injecting the requisite liquidity into the banking system. The CBK started experimentation with repos in September 1966. More recently, the CBK also utilizes Term Auction Deposits (TAD) to mop up liquidity from commercial banks when its securities are exhausted or when it considers it desirable to offer longer tenor options (Currently at 14, 21, and 28 days). TAD entails transfers of commercial banks deposits to CBK at an auction price but with no exchange of securities.

In addition to the commercial paper market, banks use repo market, the federal funds market, and the interbank market to finance themselves REPO allows market participants to obtain collateralized funding by selling their own or their client's securities and agreeing to repurchase them when the loans mature (Markus, 2009). While a repo is legally the sale and subsequent repurchase of a security, its economic effect is that of a secured loan. Economically, the party purchasing the security makes funds available to the seller and holds the security as collateral. REPOs are considered

very safe in terms of credit risk because, in general, the loans are backed by government securities (CBK, 2012)

The third component of the monetary policy operational framework is the minimum Cash Reserves Ratio (CRR). The minimum CRR is aimed at stabilizing money market interest rates without recourse to frequent central bank interventions in the open markets; and creating or enlarging the structural liquidity shortages of the banking sector to increase the effectiveness of monetary policy action. Although the minimum CRR has existed since June 1978, it was not actively utilized until the early 1990s. When the Central Bank increases the reserve ratio, it reduces the amount of supply and of money in the loanable funds markets and triggering upward movements in interest rates (Madura, 2003).

Treasury bill is another policy tool utilized by CBK, they are less risky and the most marketable of all money market instruments used by the government to raise money by selling bills to the public. T-bills have a maturity period of 91, 182 and 364 days. Principally, sales are conducted via auction, at which investors can submit competitive or non-competitive bids. A competitive bid is an order for a given quantity of bills at a specific offered price (Madura, 2003). Individuals can buy purchase T-bills directly at auction or on secondary market from a government dealer. T-bills are sold at a discount from face value (cash payment at maturity) and pay no explicit interest payments. At the bills maturity, the holder receives from the government a payment equal to the face value of the bill (Bodie, 2002). T-bills are highly liquid, which means they can easily be converted to cash and sold at low transaction cost with low price risk. Before 2006 the 91 day T-bill was the benchmark

rates applied to bank that were looking to borrow overnight from CBK. The rate was pegged at 91 day T-bill rate plus margin normally 3%. As a result it developed as the benchmark rates on which all rates were directly or indirectly pegged to.

The CBK also provides, as a lender of last resort, liquidity to commercial banks but in a manner that would not compromise the adopted monetary policy stance. Through the open discount window (standing facilities), the CBK provides liquidity with overnight maturity to individual banks facing unforeseen liquidity shocks. It therefore provides a type of insurance mechanism for banks. The CBK discount window is closely linked to its monetary policy stance, with the window rate determined by CBR. The current window rate is CBR +6 percent.

1.1.2 Commercial Bank Lending Rates

Lending Rate, also interchangeably referred to as interest rate, is the fee that a borrower must pay to a lender to make up for the opportunity cost that the lender incurs in releasing and therefore not holding the borrowed funds. Interest rate denotes the time value of money as it is the rate at which an amount of money accrues overtime. It is the price a borrower pays for the use of money they borrow from a lender/financial institutions or fees paid on borrowed assets (Crowley, 2007).The biggest challenge Kenya is facing is the persistent increase in lending rate where the cost of borrowing has been rising incessantly. This has a negative effect on investment because the higher cost of borrowing discourages investors from borrowing capital, it also has a negative effect on commercial banks profitability and propagate rise in non-performing loans. Availability of affordable credit for investment and consumption usually lead to an increase in the overall rate of

economic activity and consequently economic growth, while higher cost of borrowing stunts economic growth.

The general consensus in Kenya is that commercial banks have been reluctant to reduce their lending rates even when the CBR is at all-time low. While the CBK has expended much effort to influence money supply by implementing various policies to curb inflation, there has been general uproar this has not been felt on the ground because of commercial banks having failed to respond in equivalence especially where falling rates is concerned. There are many determinants of interest rate in an economy especially those directly related to bank balance sheets and bank characteristics are expected to have strong influence on lending rates, such as deposit rates, bank assets, market share, and the share of non- performing loans in total credit exposure, bank liquidity, capital adequacy (Aress, 2012). This study sought to establish the responsiveness of commercial banks' lending rates to changes in monetary policy stance.

1.1.3 Relationship between Monetary Policy and Lending Rate

While there is widespread consensus that banks play a crucial role in the transmission of monetary policy actions to the economy, there is considerable controversy over the precise role that banks play. There is general agreement among economists and policymakers that monetary works mainly through lending rates. When the central bank policy is tightened through a decrease in reserve provision, for instance, interest rates rise. The rise in interest rates leads to a reduction in spending by interest sensitive sectors of the economy, such as housing and consumer purchases of durable goods. Banks play a part in this lending rate mechanism since a reduction in the

money supply, which may consist of deposit liabilities of banks, is one of the principal factors pushing up lending rates.

It is generally believed that monetary policy actions are transmitted to the economy through their effect on market interest rates. According to this standard view, a restrictive monetary policy by the Central Bank pushes up both short-term and long-term interest rates, leading to less spending by interest-sensitive sectors of the economy such as housing, consumer durable goods etc. conversely, an easier policy results to lower interest rates that stimulates economic activity. Unfortunately, although casual observation suggests a close connection between the actions of the Central Bank and short-term interest rates, the relationship between policy and long-term interest rates appears much looser and more variable (Roley and Sellon, 1995).

1.1.4 Monetary Policy and Lending Rates in Kenya

The CBK is responsible for implementing monetary policy in Kenya in three main ways; firstly by the use of OMO which refers to the buying and selling of securities to regulate money supply, short term interest rates and credit conditions in the economy. After the CBK buys securities, it increases the reserves of commercial banks thus enabling them to lend more to their customers. This in turn increases the monetary supply in the economy (CBK Monetary Policy Statement June, 2013). Secondly, monetary policy is implemented by the use of CBR which is defined as the lowest rate of interest charged on loans to commercial banks by the CBK and is the base for all monetary policy operations. CBR is determined by the MPC and its movement in direction and magnitude signals the monetary policy stance. A reduction of the CBR shows an easing of monetary policy and a for market interest rates move downwards.

Lower interest rates leads to an increase in the demand for credit which further spurs economic activities leading to growth (CBK Monetary Policy Statements June, 2013). Thirdly, CBK uses CRR which is the share of a commercial banks deposit liability which must be deposited at CBK at no interest. An increase in CRR reduces liquidity and could also dampen demand- driven inflationary pressures, a reduction improves CB's liquidity thus enabling them to expand credit (CBK Monetary Policy Statement June, 2013).

Kenya has been experiencing sky high cost of borrowing thereby having an adverse effect on investment. High lending rate discourages investors from borrowing capital. The general feel in Kenya is that CB's have been reluctant to reduce lending rates even when the CBR is at all time low. While the CBK has expended much effort to influence money supply by implementing various policies to curb inflation, there has been a general uproar this has not been felt on the ground because commercial banks have failed to respond in equivalence, especially where falling of rates is concerned (Njiru, 2014).

1.2 Research Problem

The objective of monetary policy, on the whole, do differ from country to country, with some countries pursuing one key policy instrument while others use several instruments in seeking their monetary objectives (Mbotu, 2010). CBK formulates and conducts monetary policy through the use of OMO's, CBR, CRR and foreign exchange operations to keep low and stable inflation (CBK MPC statement, 2008). The Ugandan monetary stance primarily consist of using the Bank rate and Rediscount rate as policy rates to supplement the quantity based instruments flexible

exchange rate policy. It is also used as a means of containing instability in the money market (Bank of Uganda)

In the conduct of monetary policy, the Central Bank has at its disposal a number of Instruments, most of which depends upon setting or influencing interest rates (Patterson and Lygnerud, 1999). The Central bank is usually the monopoly supplier of cash to the financial system of an economy. It can therefore set interest rates by the way in which it makes that supply. It can make fixed amounts available at a fixed rate of interest, 'rationing' the supply between the bidders according to some key. Or it can auction a fixed amount, which is allocated to the institution offering the highest rate of interest. The buying or selling of Treasury bill or bonds, open market operation all will have the effect of raising or lowering interest. Other instruments which can directly affect the degree of liquidity in a financial system and hence interest rates, include changing minimum reserve requirements (Lee and Prasad, 1994). These are legal obligations placed upon banks to hold a certain amount of liquid assets, like Treasury bills. Central banks can also remove liquidity from a system by requiring financial institution to make special deposits with the Central bank. This mechanism can be useful, for example, when it is necessary to 'sterilize' money which has been issued (i.e. Created) to support a currency in the foreign exchange markets (IMF, 1996). First, the discount and other rates set by the Central Bank will feed through into financial system. The Bank is the 'lender of last resort' in an economy, and can determine the short term rate floor and ceiling.

Having introduced the CBR in 2006, the CBK hoped to follow its older peers in the more developed markets in setting up an effective market signaling instrument of monetary policy that would be generally accepted by financial market players as

result of which, financial market would be quick to align their retail interest rates with those of the policy rate. Shifts in money market rates, including the policy rate, are not completely passed through to retail lending rates, in the euro zone and such loans rates (retail rates) depend on how commercial banks reacts to the shifts in money market rates (policy rates); if commercial banks do not promptly respond to a change in money market rates, then a policy shift will not be widely felt in the economy (Kobayashi, 2008). (Lolwe, 1995) finds that while response of short-term money market interest rates is rapid and complete, pass-through to other interest rates such as the deposit and lending rates of financial intermediaries appears to be slower in the developed markets.

Several studies have been done in relation to monetary policy in Kenya vis-à-vis commercial bank lending rates. (Aress, 2012) in his study on the effect of monetary policy on interest rate in Kenya using CBR, 91-days T-bill rate and REPO rate concluded that it influences lending rates in Kenya. Among those three factors T-bill rate had the highest impact while CBR had a negative influence on lending rate. (Kimani, 2013) empirically studied the effect of monetary policy on lending behavior of commercial banks making a conclusion that, of the four variables she used, CBR had the greatest impact. In his research paper (Mbotu, 2010) adduced that CBR can be used to as a tool to guide the level of interest charged by the commercial banks, he goes further to recommend a need carry out a study over a long period from the inception of CBR Monetary policy has a higher influence on interest rates than fiscal policy Njiru (2014). (Fridah, 2011) noted that majority of commercial banks had their lending rates varying. Prudential regulation, bank supervision and better contract enforcement were the most influencing factors of commercial bank lending rate. From

the above review, a gap has been identified in the current research on the most effective monetary policy instrument currently in operation in controlling lending rates in Kenya. This study seek to investigate of the four policy instruments; CBR, CRR, REPO rate and T-bill rate currently in operation, to what extend does each has on the lending rates in Kenya.

This study attempted to answer the following question; - How does monetary policy relate to commercial banks lending rates in Kenya?

1.3 Research Objective

To assess the impact of monetary policy on commercial banks lending rates in Kenya.

1.4 Value of the Study

This study adopted the body of knowledge to the scholars and academicians of monetary policy, lending rate and their relationship in Kenyan market. It would also elicit more interest in the study of the subject and expound areas that need further research and exploration.

Monetary Policy Committee (MPC) would benefit in formulating optimum mix of policy instrument to deploy without having an adverse impact on lending rate by considering their degree of impact.

The government and the general public would have an insight on to what extent does Central Bank of Kenya has on the control over prevailing lending rate, it would also disclose the indirect influence the government has in propagating the perpetual high lending rates in Kenya.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section contains a literature review as presented by various authors based on the objective of the study. The literature review provides a description of theoretical rationale of the problem being studied as well as what research has already been done and how the findings relate to the problem at hand. The chapter deliberates introduction of literature review, theoretical review, and empirical studies on monetary policy. The section culminates with a summary of the entire literature review.

2.2 Review of Theories

This section reviewed some of the theories surrounding the factors that influence the determination of lending rates as well as the contribution of monetary policy to the changes in lending rates. The purpose of this section was to examine the corpus of the theory that has accumulated in regard to the topic of this study.

2.2.1 Keynesian theory

This theory was developed by Keynes (1937). Keynesians believes that an expansionary monetary policy will decrease interest rates, increase spending, increase aggregate demand and output and therefore decrease unemployment. Keynes argued that the solution to the great depression was to stimulate the economy (“inducement to invest”) through some combination of two approaches: a reduction in interest rate and government investments in infrastructure. Investment by government injects income, which results in more spending in the general economy, which in turn stimulates more

production and investments involving still more income and spending. The initial stimulation starts a cascade of events whose total increase in economic activity is a multiple of original investments.

A central conclusion of Keynesian economics is that, in some situations no strong automatic mechanism moves output and employment towards full employment levels. This conclusion conflicts with economic approaches that assume a strong general tendency towards equilibrium. In the neoclassical synthesis', which combines Keynesian macro concept with a micro foundation, the condition of general equilibrium allow for price adjustments to eventually achieve this goal. More broadly, Keynes saw his theory as a general theory, in which utilization of resources could be high or low, whereas previous economic focused on the particular case of full utilization.

Monetary policy transmission through the interest rate channel is based on the traditional Keynesian interpretation of the role of money for real interest rate movements. A change in interest rates affects firm's investment spending, consumer spending on housing and personal consumption of durable goods. A problematic observation noted by (Mishkin, 1995) and (Bernanke and Gertler, 1995) is that interest rate cannot be identified as the most quantitatively important cost-of-capital variable for aggregate spending. The shortcoming in the traditional interest rate channels are explained with financial market imperfections and the credit view of the transmission mechanism.

(Mishkin, 1995) spells out the variances in the expression of credit channel. A monetary contraction leads to a drop in bank lending due to fall in the bank deposits,

and due to a corrosion of borrowing firms balance sheets and a decline in collateral value. Degeneration in aggregate credit reduces output. (Mishkin, 1995) mentions consumer liquidity preferences as well, for example consumers would rather hold more liquid assets after a drop in the stock market following a monetary contraction, thus decreasing spending on illiquid assets such as real estate and on durable goods.

2.2.2 Loanable Funds Theory

This theory is also known as the Neo-classical theory of interest and was developed by Knut Wicksell in 1968. Under loanable fund theory of interest, the rate of interest is calculated on the basis of demand and supply of loanable funds present in the capital market. The nominal rate of interest is determined by the interaction between the demand and supply of loanable fund, keeping the same level of supply, an increase in the demand for loanable funds would lead to an increase in the interest rate and vice versa. An increase in the supply of the loanable funds would result in the fall in the rate of interest. If both the demand and supply of loanable funds change, the resultant interest rate would depend much on the magnitude and direction of movement of the demand and supply of the loanable funds. The demand for loanable funds is derived from the demand for final goods and services which are again generated from the use of capital that is financed by the loanable funds. The demand for loanable funds is also generated from the government (Bernake, 2000).

The loanable funds theory of the rate of interest has similarity with liquidity preference theory of interest in the sense that both of them identify the significance of cash balance preferences and the role played by banking sector to ensure security of the investment funds. (Wray, 1992) in his work titled alternative theories of the rate of

interest criticizes the liquidity preferences theory by pointing out that the rate of interest is not purely a monetary phenomenon. Real forces like productivity of capital and prudence of saving by the people also play an important role in the determination of the rate of interest which is ignored by Keynes liquidity preference theory. Wraays adds that liquidity preference is not the only factor governing the rate of interest. There are several other factors which influence the rate of interest by affecting demand the demand for and supply of investible funds. The liquidity preference theory does not explain the existence of different rate of interest prevailing in the market at the same time. He further notes that Keynes ignores saving or waiting as a mean or source of investible fund. To part with liquidity without there being any saving is meaningless. Keynesian theory only explains interest in the short-run and gives no clue to the rates of interest in the long run. He finally says that Keynes theory of interest, like the classical and loanable funds theories, is indeterminate as one cannot know how much money will be available for the speculative demand for money unless they know how much the transaction demand for money is.

The loanable funds theory is considered as an improvement of the classical theory of interest. However it has been criticized for assuming that saving is a function of the rate of interest; it ignores the influence of the changes in the level of investment on employment, income and on savings (Satija, 2009).

2.2.3 Liquidity Preference Theory

According to Keynes, interest is the reward for parting with liquidity for a specified period of time. According to this theory investors will always prefer short-term securities to long-term securities. To encourage them hold long term bonds, long term

bonds should yield higher interest than short-term bonds. The yield curve therefore will always be upward sloping. Long term bond normally yields more than short term bonds for two reasons; investors generally prefer to hold short term securities because such securities are more liquid since they can be converted into cash with little danger of loss of principal hence, other things held constant, investors will accept lower yield on short-term securities. At the same time borrowers react in the opposite direction, they generally prefer long term debts to short-term debts because short-term debts expose them to the risk of having to repay the debt under adverse condition.

Commercial banks determine the interest rate in the credit market by marking up the banks base rate and supply credit at this rate to those borrowers whom they consider credit worthy. Banks are therefore price makers and quantity takers within the limits given by credit worthiness. The commercial bank mark-up on the base rate is determined by their risk and liquidity consideration and also by the degree of competition in the commercial bank sector. In this approach, liquidity preference determines the structure of interest rates and not level of interest rates the commercial bank's liquidity preference is a determinant of the mark-up and hence the spread between the base rate and the market rate of interest. If the liquidity preference and risk considerations of commercial banks and hence, their mark up remain constant, the Central bank interest rate setting in the base money market also determines the market rate of interest in the credit market (Smith, 2003)

Under these conditions, changes in the base rate and in the credit market rate of interest are due to changes in the monetary policy stance. Changes in the central bank base rate will therefore also shift the credit supply curve and affect credit demand and

hence real economic activity financed by credit. However if commercial bank liquidity and risk considerations or the degree of competition and hence their mark-up change in the face of a changing base rate of interest, monetary policy may not be able to determine the credit market rate of interest directly. An increasing base rate of interest will always trigger an increasing credit market rate, because commercial banks have to recover costs of refinancing and have to gain (minimum) profits, but a decreasing base rate may not be followed immediately by a falling credit market rate, if commercial bank liquidity and risk premium increase due to rising uncertainty or if banks profit aspiration increases. Critics say that Keynes overemphasized the liquidity preference factor in the theory of interest and that it is only when a person has savings that the question of parting with liquidity arises (Satija, 2009).

2.2.4 Loan Pricing Theory

Stiglitz and Weiss (1981) declared that banks are not in a position to set high interest rates in order to achieve the maximum interest income. This is because Banks should consider the problems of adverse selection and moral hazard since it is very difficult to forecast the borrower type at the start of the banking relationship. If banks set interest rates too high, they may induce adverse selection problems because high-risk borrowers are willing to accept these high rates. Once these borrowers receive their loans, they may develop moral hazard behavior or so called borrower moral hazard since they are likely to take on highly risky projects or investments (Chodecai, 2004). From the reasoning of Stiglitz and Weiss, it is usual that in some cases we may not find that the interest rate set by banks is commensurate with the risk of the borrowers.

2.3 Determinants of Lending Rates

In economics, interest is a payment for the services of capital. It represents a return on capital (Crowley, 2007). There are many determinants of interests in an economy especially those directly related to bank balance sheets and bank characteristics are expected to have strong influence on lending rates, such as deposit rates, bank assets, market share, bank liquidity, capital adequacy, operating costs and the share of external capital. All the variables enter the regressions with one lag, which is recommended both from statistical (i.e. avoiding endogeneity problems) and the economic point of view (i.e. the existence of a certain delay in the effects of a particular change) (Kok and Werner, 2006)

In conduct of monetary policy, a Central Bank has at its disposal a number of instruments, most of which depend upon setting or influencing interest rates (Patterson and Lygnerud, 1999). Central bank is usually the monopoly supplier of cash to the financial system of an economy, it can therefore set interest rates by the way in which it makes that supply. It can make fixed amounts available at a fixed rate of interest, 'rationing' the supply between the bidders according to some key. Or it can auction a fixed amount which is allocated to the institutions offering the highest rate of interests. The buying and selling of T-bills or bond, OMO, CRR will have and the effect of lowering or raising the lending rates, they can also have a direct effect on the degree of liquidity in a financial system, and hence lending rate (Lee and Prasad, 1994). Central banks can also remove liquidity from a system by requiring financial institutions to make special deposits with Central Bank. This mechanism can be

useful, for example, when it is necessary to ‘sterilize’ money which has been issued (i.e. created) to support a currency in the foreign exchange markets (IMF, 1996).

2.4 Empirical Literature Review

The monetary policies in use by most Central Banks affect interest rates in most economies. A number of studies have examined how banks adjust loans, securities, and deposit and non-deposit liabilities to changes in monetary policy. (Gambacorta and Mistrulli, 2004) study in Italian banks during the period 1992-2001 using short term interest rates found that well capitalized banks can shield their lending from monetary policy shocks as they have easier access to non-deposit fund raising. (Kashyap and Stein, 2000), among others suggest that the impact of monetary policy on lending behavior is stronger for banks with less liquid balance sheet. In response to a tightening of policy, banks transaction deposits or core deposit fall immediately, the total bank loan decline, but only after a significant lag of two or three quarters. Subsequently, banks are able to maintain lending in the face of a decline in core deposit by selling securities and issuing managed liabilities such as time deposits and Eurodollar borrowings (Bernanke and Blinder, 2002), (Gertler and Gilchrist, 2003). (Morris and Sellen, 2005) noted that bank lending declines when policy is tightened, the time lags appear quite long. Moreover, the contemporaneous decline in loans and output is consistent with a reduction in lending as it causes output to fall.

Studies by (Cook and Hahn, 1989b) and (Radecki and Reinhart, 1994) examined the response of short-term and long-term rates to changes in a measure of the funds rate target in the days surrounding policy actions in United State and found that policy actions have a significant positive effect on interest rate of all maturities. (Kobayashi, 2008) states that only fraction of all loan rates is adjusted in response to a shift in the

policy rate, fluctuations in the average loan rate lead to welfare costs. However, a huge number of recent studies have also reported that, especially in the euro area, shifts in money- markets rates including the policy rate, are not completely passed through to retail lending rates. (Sorensen and Lichtenberger, 2007) insisted that the competitiveness of the financial market is a key to understanding the degree of loan rate pass-through would be attained as financial markets become more competitive.

Kleimeier and Sander (2006) emphasized the role of monetary policymaking by central banks as a determinant of the degree of pass- through. They argued that better-anticipated policy changes tend to result in a quicker response of retail interest rates. However, there is conflicting evidence on effects of monetary policy tightening and lending from banks. (Gertler and Gilchrist, 2003) conducted a study that specifically looked how bank business lending responds to policy tightening. Their study reveals that business lending does not decline when policy is tightening. They concluded that the entire decline total lending comes from a reduction in consumer and real estate loans. Moreover, they added, when the analysis is narrowed further to loans for manufacturing firms, bank lending actually shows a significant increase in response to tighter policy. Indeed, for manufacturing firms, most of the increased lending appears to go to large firms; while loans to small manufacturing firms are largely unaffected to policy tightening.

In contrast to (Gertler and Gilchrist, 2003) study, (Kashyap and Stein, 2000) found evidence that business lending may respond to a tightening of monetary policy. They examined the lending behavior of small and large bank, rather than loans received by small and large firms. They found that when policy is tightened, both total loans and business loans at small banks fall, while loans at large banks are unaffected. The

differential response of small banks may indicate they have access to alternative funding sources than large banks and so are less able to avoid the loss of core deposits when policy is tightened. Since small banks lend primarily to smaller firms, their finding is consistent with the view that monetary policy may work, in part, through a credit channel. (Sun and Sutcliff, 2003) traced the impact of monetary policy committee of the bank of England rate announcements through three markets: the spot market (LIBOR), the futures market and the option market. Their aim was to establish of MPC announcements on the anticipated volatility of interest rate future contracts. They found that both the spot and futures market reacted strongly to surprise changes in the repo rate. The response was asymmetric, with bigger reaction for positive surprises. The data also revealed that MPC announcement lead to a substantial decrease in volatility. Several local studies have been done in relation to monetary policy in Kenya vis-à-vis commercial bank lending rates. (Aress, 2012) in his study on the effect of monetary policy on interest rate in Kenya concluded that lending rates in Kenya were affected by various factors key among them being the 91 Day Treasury bill rate which had the highest impact among the three variables studied in this study. (Kimani, 2013) posited CBR, cash reserve ratio, open market operation and uncertainty caused by possible outcomes caused by monetary policy changes influences lending behavior by commercial banks in Kenya. Monetary policy has a higher influence on interest rates than fiscal policy (Njiru, 2014). Fridah (2011) noted that majority of commercial banks had their lending rates varying. Prudential regulation, bank supervision and better contract enforcement were the most influencing factors of commercial bank lending rate. In his study on impact of the Central Bank of Kenya Rate (CBR) on commercial banks' benchmark lending interest

rate (Mbotu, 2010) concluded that the CBR can be used as a tool to guide the level of interest rate charged by commercial banks. (Kimani, 2013) found out that monetary policy influences lending behavior of commercial banks to a great extent. Monetary policies induce changes in interest rates, and the amount of money and credit in the economy to minimize excessive price fluctuations, and promote economic growth. She suggested that using short term interest rates, well capitalized bank can shield their lending from monetary policy shocks as they have easier access to non-deposit fund raising, restrictive monetary policy works not only by raising interest rates, but also by directly restricting bank credit.

2.5 Summary of the Literature Review

This chapter reviewed literature on the relationship between monetary policies and commercial bank lending rate (interest rates). The chapter embarked on reviewing the theories on which this study is pegged on: Keynesian theory, loanable funds theory, Liquidity preference theory and Loan pricing theory. Keynesians regarded monetary policy as a factor that determines interest rates, while loanable fund theory, the rate of interest is a function of interest, savings, investment, bank credit and the desire to hoard, the liquidity preference theory was of the view that interest rate is determined by liquidity preferences. The chapter then explores various empirical studies both locally and internationally; (Morris and Sellen, 2005) noted that bank lending declines when policy is tightened. (Kobayashi, 2008) states that only fraction of all loan rates is adjusted in response to a shift in the policy rate. Local studies also assert that monetary policy influences the rate of lending by commercial banks. (Aress, 2012), (Mbotu, 2010) and (Kimani, 2013) are some of the various researchers their study was used to affirm the hypothesis as posited by this study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter involves a blueprint for research methodology which presents the various stages and phases to be used to conduct the study. Therefore, this section sought to answer the research question raised in the study. It specifies the research design, target population, data collection method and data analysis.

3.2 Research Design

The research design was a plan, structure and strategy conceived so as to obtain answers research questions. It provided a framework for planning and conducting a study. The study adopted a quantitative design, this calculate measures of central tendency like mean and variability like standard deviation just as they do in descriptive research, but these measures alone do not provide evidence of significant differences or relationships among the variables under study (Cooper & Schindler, 2003). Further statistical procedure must be used to answer questions. The Chi square analysis is an example of a procedure often used to determine whether two or more variables have systematic relationship of occurrence.

3.3 Population and Sample of the Study

Population is defined by (Cooper and Emory, 1995) as the total collection of elements about which the researcher wishes to make some inferences. According to (Ngechu, 2004), a population is a well-defined or set of people, services, elements, events, group of things or households that are being investigated. The population of interest in

the study consisted of: 44 banking institutions (43 commercial banks and 1 mortgage finance company), registered and licensed under the Banking Act and are in existence as at 31st December, 2014.

Since consolidated data on the variables of the study is available at the Central Bank of Kenya, this study conducted a census by including all the members of the population.

3.4 Data Collection

The study was based wholly on secondary data from Central Bank of Kenya. Data obtained from CBK covered the period between 31st January, 2006 and 31st December, 2014. The study focused on four major monetary policy tools including: Central Bank Rate, 91-Day Treasury bill rate, REPO rate and Cash Reserve Ratio.

3.5 Data Analysis

The researcher conducted a multiple regression analysis in order to study the relationship between monetary policies and lending rate in Kenya. The regression equation applied was:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where: Y= Average Lending Rate

β_1 , β_2 , β_3 and β_4 = Beta coefficients

β_0 = Constant Term

X1 = Central Bank Rate

X2= REPO rate

X3= Cash Reserve Ratio

X4= 91-Day Treasury Bill Rate

ε = Random Error in Y observation

The data on above variables were collected from secondary data contained in Central Bank reports. Lending rate measured by average banking industry lending rates compiled by CBK on a monthly basis since 2006 to 2014. The monetary policy instrument rates were also obtained from CBK records as statistically presented on a monthly basis for the similar period. To test for the strength of the model and the relationship between monetary policies and lending rates in Kenya, the researchers carried out an Analysis of Variance (ANOVA).

CHAPTER FOUR

DATA ANALYSIS PRESENTATION AND FINDINGS

4.1 Introduction

The study objective was to assess the impact of monetary policy on commercial banks lending rates in Kenya. This study investigated the effects of repo rates, 91-Day Treasury bill, Cash Reserve Requirement and Central Bank Rate on the lending rates of commercial banks in Kenya from 2006 to 2014. This chapter presents the analysis and the presentations of the findings.

4.2 Data presentation

4.2.1 Lending rates

The study collected secondary data on the prevailing lending rates for the nine year period under review. The lending rates started low in the year 2006 at 13.2%. The rate at the end of this year was 13.74%. For year 2008 an upward trend was observed before July but the rate continued to increase till December whereby the rate was at an all-time high of 14.87%. For the year 2009, a shaky trend was observed whereby the rate kept on fluctuating up and down. The highest rate for this year was 15.09% in June and the lowest was in February with 14.67% as the rate. In 2010, the trend was generally decreasing whereby at the beginning of the year the rate was 14.98% and decreased across the month to close at 13.87% in December.

The year 2011 started on a high rate of 14.03% which continued to decrease only to rise again after July and close at an all-time high of 20.04% in December. The rate

continued to fluctuate up and down at the first quarter of 2012, the rate then continued to fall towards the end year to close at 18.15%. In 2013, the rate showed a strong downward trend by starting at a high of 18.13% only for it to close at a low of 16.99%. In 2014, the rate was at a high of 17.03% which fluctuated up and down across the year to close at a low of 15.99% in December. The lending rates were at an all time high of 20.34% in 2012 and at all-time low of 12.87% in September 2007.

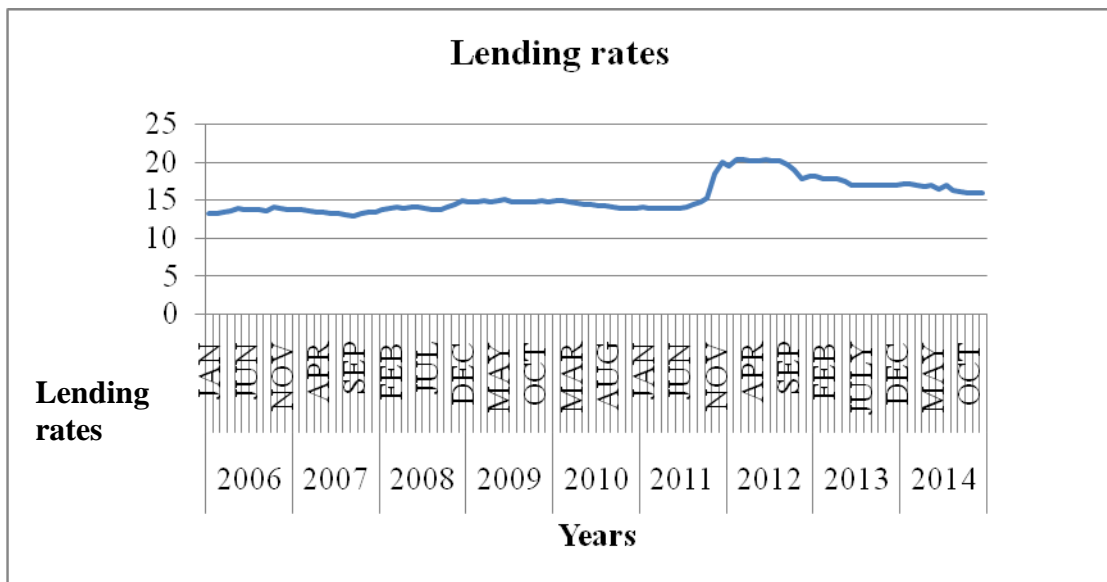


Figure 4. 1: Lending rates.

4.2.2 Repo rate

In 2006, the repo rate generally showed a decreasing trend after starting with a high of 7.81% in January and closing on December with a low of 6.34%. For 2007, the trend was generally increasing for most months of the year. The repo rate was highest on September at 7.81% and a low of 6.42% in November. In the 2008 year, the rate was highest at the beginning of the year with 7.75% as the rate. The Lowest rate for this year was at December with 6.03%. The least rate for 2009 was 5.1% in January. There was however no activity in the repo market in 2010. The year 2011 saw a least

rate of 1.66% in March and a high rate of 18.89% in October. For 2012, the least rate was 6.39% in December, it was however highest on May at 16.97%. In 2013, the rate was lowest at 6.6% and highest at 9.35% on January and March respectively. The final year of 2014 showed a highest rate of 12.95% and a lowest rate of 6.46%. The repo rate was highest in October 2011 at 18.89% and lowest rate was 1.66% on March 2011.

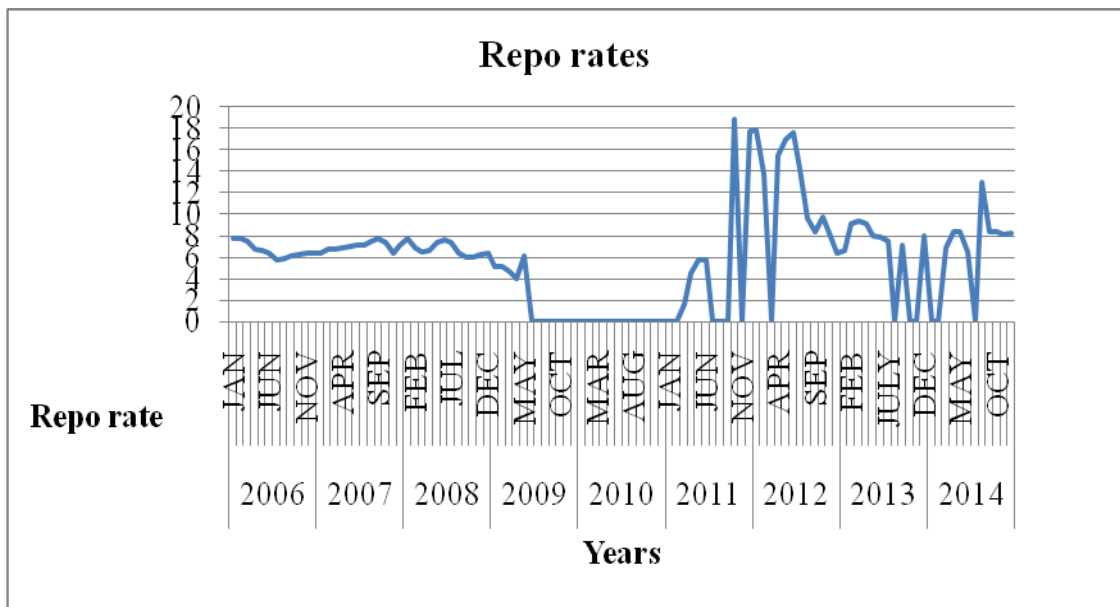


Figure 4. 2: Repo rate

4.2.3 91-Day Treasury Bill

The 91-Day Treasury Bill started high in the year 2006 at 8.23% and showed a decreasing trend during the year to close at a low of 5.73% on December. In year 2007, the rate was generally increasing it was highest on October at 7.55%. The subsequent year 2008 showed an increasing trend whereby the rate was highest in December at 8.59%. However, in 2009 the rate showed a decreasing trend to close at a low of 6.82% in December. This was also similar in 2010 whereby the trend

decreased uniformly across the year. It started with a high rate of 6.56% in January and had a low rate of 2.28% in December. The rate however increased generally in 2011 from a low of 2.46% in January and increased to 18.3% in December. An opposite trend was however observed in 2012 whereby a high rate of 20.56% was observed in January and a low rate of 8.3% was observed in December. In 2013, the rate fluctuated up and down and showed a high rate of 10.38% and a low rate of 5.92%. For the year 2014, a general downward trend in the 91-Day Treasury Bill rate was observed with a high of 9.26% in January and a low of 8.58% in December.

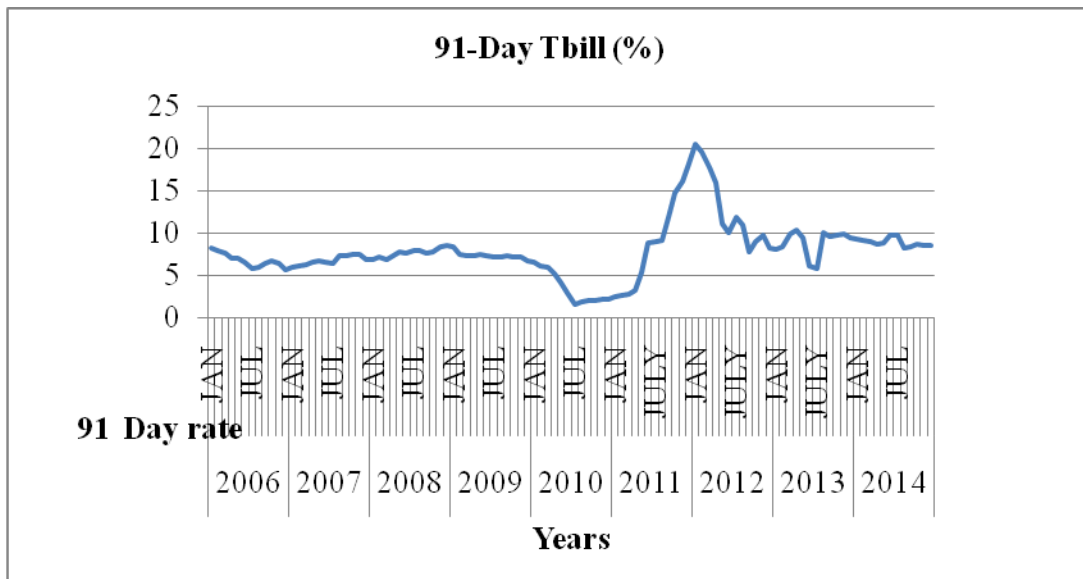


Figure 4. 3: 91-Day Treasury Bill

4.2.4 Cash Reserve Requirement

The Cash Reserve Requirement showed flat trend between the years 2006 to 2014. The rate was however lowest from June 2009 to May 2011. The rate was however highest between the years 2006 to November 2008.

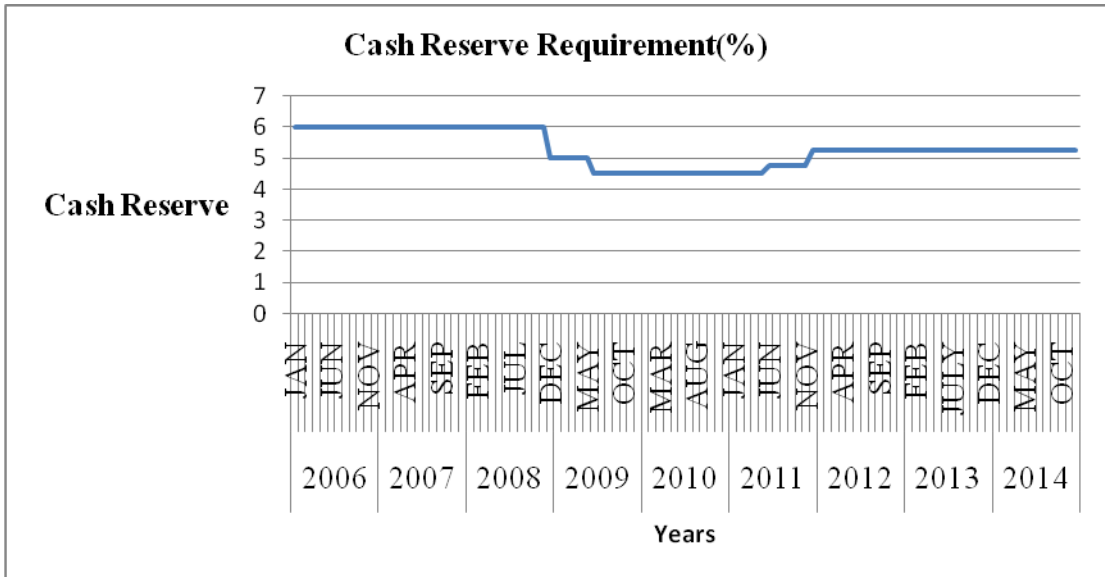


Figure 4. 4: Cash Reserve Requirements

4.2.5 Central Bank Rate

The Central Bank rate showed a low of 9.75% in 2006 and a high of 10% in the same year. The CBR rate declined in the year 2007 from a high of 10% in January. The rate showed a fluctuating trend in the year 2008 with a low of 8.5% in December and a high of 9% between June and November. For 2009, the rate started with a high of 8.5% and decreased to a low of 7% in December. This trend was observed in 2010 whereby the rate started with a high of 7% and dropped yearly to 6% in December. In 2011, the CBR rate was at a high of 16.5% in November. The lowest rates for the year were 5.75% in January and February. In 2012, the rate continued to decline with a low rate of 11% in December and November. January till June had the highest rate at 18. The rate however declined to 9.5% from January 2013 to April 2013 and then stagnated at 8.5% till December 2014. The highest rate was therefore 18% whereas the lowest rate was 5.75%.

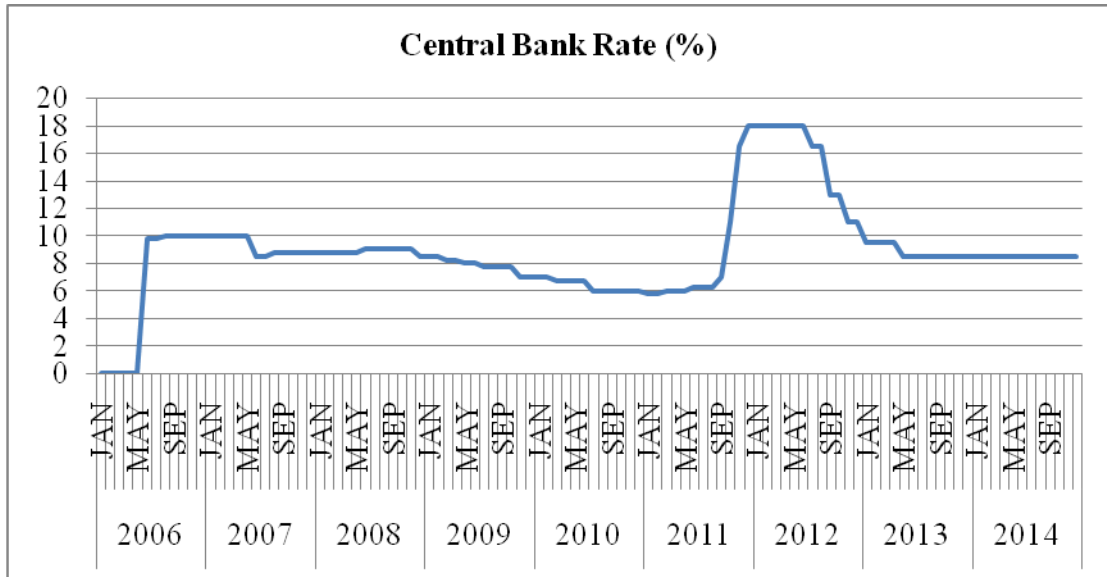


Figure 4. 5: Central Bank Rate

4.3 Regression Analysis

To supplement the above analysis, the researcher also regressed the dependent variable against the independent variables using a multiple regression analysis. This helped to ascertain the association between the lending rates and the independent variables (Central Bank Rate, Cash Reserve Requirement, Repo Rate and 91-Day Treasury Bill) included in the study. The regression results are as shown in the Table 4.1.

Table 4.1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.837	.700	.688	1.17469

Predictors: (Constant), Central Bank Rate, Cash Reserve Requirement, Repo Rate, 91 Day Treasury Bill.

The studied independent variables explained 68.8% of the changes in lending rates as in the study period as shown by the adjusted R square. Therefore, other factors that

affect lending rates not studied contributed 31.2% of the changes in lending rates in the study period.

Table 4. 2: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	18.099	1.237		14.632	.000
Repo rate	.076	.034	.168	2.225	.028
91-Day treasury	.231	.047	.374	4.938	.000
Cash reserve requirement	-1.342	.229	-.366	-5.869	.000
Central bank rate	.240	.044	.412	5.427	.000

Dependent Variable: lending rates

Predictors: (Constant), Central Bank Rate, Cash Reserve Requirement, Repo Rate, 91-Day Treasury Bill.

In determining the effect of monetary policy on banks` lending rates, the researcher conducted a multiple regression analysis using four independent variables.

The equation ($Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon$) became

$$Y = 18.099 + 0.076 X_1 + 0.231 X_2 - 1.342 X_3 + 0.240 X_4 + E$$

Where Y is the dependent variable (lending rates), X1 is the Repo rate, X2 is 91-Day Treasury Rate, X3 is Cash Reserve Requirement and X4 is Central Bank Rate.

Holding all the independent variables constant, the lending rate was 18.099. The findings analyzed showed that holding all other independent variables constant, a unit increase in Repo rate lead to 0.076 in the bank`s lending rates. A unit increase in 91 Day Treasury Bill holding all other factors constant lead to a 0.231 increase in bank`s lending rates.

Holding all other variables constant, a unit increase in Cash reserve requirement led to -1.342 decrease in the bank`s lending rates. Lastly, a unit increase in Central Bank Rate while other factors are held constant lead to a 0.240 increase in the lending rates. All the study variables were relevant in explaining the bank`s lending rates since their significance values were less than 0.05 preset significance level.

4.4 Summary and interpretation of findings

Affordable financing for developments and consumption in the economy is defined by bank`s lending rates. These two elements of macroeconomic concern are crucial in influencing economic growth rate in the country. Nevertheless, when bank`s lending rates are high, the population tends to borrow less. This study concentrated on the impact of monetary policy on commercial banks lending rates in Kenya.

The research findings indicated that monetary policies actually had a great influence on bank`s lending rates in Kenya from year 2006 to 2014. The Central bank of Kenya has been the mandated with the sole duty of maintaining a stable lending rate in the country so as to ensure economic growth. The Central Bank affects prevailing bank lending rates by the rate with which it offers investors the short term treasury bills. It is important to note that an increment in CBR will cause the current short-term lending rates to rise, which will consequently push interest rates up. A stable cash reserve requirement rate led to small fluctuations in the banks` lending rates as shown in the graphs. From January 2006 to November 2009 the rate stood at 6% and this translated to lending rates varying slightly between 13.2% and 14.33% in the same period.

Stances drawn as a result of this research is that monetary policies by the Central Bank of Kenya affect lending rates in Kenya. These policies are actually meant to regulate various macro-economic variables in the economy in an attempt to ensure financial stability and appreciation of the local currency. However, the Central Bank does these tasks bearing in mind that their actions have a bearing on economic and infrastructural development in the country. From the research findings, the four independent variables explained up to 68.8% of the changes in the bank lending rates in Kenya. This implied that other variables not included in this study affected lending rates by 31.2%. These findings are in agreement with Aress (2012) who concluded that indeed monetary policies had an effect on interest rates. This is because monetary policies influence the money in circulation in the country. The study by Aress (2012) concluded that 91-day Treasury Bills influenced the lending rates in Kenya by a great margin. This is due to the fact that the rate represents the actual risk free investment return to investors.

The research findings established that there is a strong positive relationship between CBR rate and bank's lending rates. A high CBR rate of 18% translated to a high lending rate at 20.34% in March 2012. Therefore, increments in CBR lead to a higher lending rate by the banks. These findings concur with Njiru (2014) who deduced that a significant and positive relationship exists between lending rates of commercial banks' and the Central Bank Rate. This implies that an increment in Central Bank Rate will lead to an increment in lending rate. The study that Repo, CBR and 91-Day Treasury Bill positively influenced lending rates are in agreement with Aban (2013) who observed that an increment in monetary policy rates resulted to a decrease in loan

supply in small banks which translated to higher lending rates being adopted instituted by smaller banks.

The findings depict that the Repo rate was the third contributing factor to lending rates after the CBR and 91-Day Treasury Rate. This however contradicts research findings by Aress (2012) who concluded that the 91-day Treasury bills influenced bank`s lending rate by the greatest margin followed in rank by REPO rate. This would be translated to mean that Central Bank Rates changes are not fully reflected in the bank`s lending rates. This is so because investors may take some time off before deciding to free their investments in order to gain as a result of interest rates changes.

CHAPTER FIVE

SUMMARY CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

The research findings indicated that monetary policies actually had a great influence on bank's lending rates in Kenya in the study period. The Central bank of Kenya has been mandated with the sole duty of maintaining a stable lending rate in the country so as to ensure economic growth. The Central Bank affects prevailing bank lending rates by the rate with which it offers investors the short term treasury bills. The CBR, Repo rate and 91-Day Treasury bill positively influenced the lending rates as shown by the research findings. However, an increment in Cash Reserve Requirement led to a decrease in the lending rates as shown by the negative relationship between the two. Bank's lending rates are affected by monetary policies the leading one being the Central Bank Rate as shown in the study findings. The 91-Day Treasury bill follows then the Repo rate and lastly the Cash Reserve Requirement. Therefore, changes in these rates translate to changes in the lending rates. When the government intends to attract extra funding for short term projects, it motivates investors to devote in 91-Day Treasury bills thus providing with a high rate on the same. However, this was shown to increase subsequent lending rates.

Lending rates are also affected by the Repo rate. This is the rate at which financial institutions borrow from each other in order to off-set their short term balances. From the data analyzed, the Repo rate moved in the same bearing together with the 91-Day Treasury bill rate. However, in the year 2010, no activity took place in the Repo market. Another variable that has an effect on the lending rates is the Central Bank

Rate. This rate is perceived as the pedestal lending rate. It is used by the Central Bank Monetary policy Committee to check the various macroeconomic changes in the economy. It checks the inflation rates in the economy and other macroeconomic factors thus significantly affecting the bank's lending rates. In essence, this rate is primarily used to control the total amount of money that is circulating in the economy thus affecting lending rates since these rates are directly related to the total amount of money circulating in the economy.

5.2 Conclusions

From the research findings discussed in chapter four, the study concludes that indeed monetary policies have an effect on lending rates. This is due to the fact that the various monetary policy tools studied influences amount of money in circulating in the economy at any given time. The study concludes that the Central Bank Rate, the 91-Day Treasury bill, Repo rate and the Cash Reserve Requirement influenced the lending rates in that order of superiority. In summary, all the study variables (Central Bank Rate, repo rate, Cash Reserve Requirement and 91-day Treasury bills rate) together influenced the lending rate by 68.8%. The study concludes that the Central Bank Rate had the greatest influence on the lending rates.

However, the Cash Reserve Requirement seems to have a negative relationship with the lending rates. This could imply that changes in these statutory requirements are not fully felt in the lending rates. This could be due to the reason that investors take some time before they free their investments before taking advantage of the changes in the lending rates.

The results indicated that an increment in CBR, Repo rate and the 91-day Treasury bills caused the lending rates to increase whereas an increment in Cash Reserve Requirement caused the lending rates to fall. All the study variables were statistically significant in establishing the relationship between the dependent and the independent variables.

Based on the research findings, the study concludes that monetary policies indeed influences bank`s lending rates in the country. This is indeed admissible since these monetary policy tools influences the total amount of money circulating in the country. The study concludes that the Central Bank rate is the main influencer of lending rates in the study period followed by the 91-Day Treasury Bill and the Repo rate. However, the Cash Reserve Requirement has a negative relationship with the prevailing lending rates

5.3 Recommendations to Policy and Practice

Given the research findings, the study makes the following recommendations to policy and practice in the usage of monetary policies in controlling lending rates.

Before making any adjustments in the current monetary rates, the concerned authorities in this case the Central Bank should adequately assess the influence of their monetary tools on current money supply in the economy.

The Central Bank rate is the key factor influencing lending rates and hence an in depth study on the various factors of consideration adopted by the monetary policy committee considers in arriving at this rate ought to be looked so as to reinforce its efficiency. This rate is key in influencing prevailing lending rates but other factors play a role in the current lending rates. Therefore, further studies on determining the

suitable mix of 91-day treasury bills rate, repo rate, Central Bank Rate and cash reserve requirement needs to be carried.

The study recommends that the Central Bank of Kenya should lower the Central Bank Rate since it would lead to a decrement in the lending rates. The central government ought to streamline the economic environment that the commercial banks operate. This will help curb fluctuations in CBR that will consequently enhance a more stable borrowing rate. Stabilization in the lending sector will reduce uncertainties that translate to non-performing loans. The Central Bank should therefore implement effective monetary policies that will help curb speculative borrowing which has been shown to have an effect on the commercial banks` lending behavior.

Further assessment in order to establish other factors that influence lending rates such as individual bank costing methods would be pertinent. A further assessment on further factors that influences lending rates would be pertinent such as other non macro-economic variables. Similarly, since Cash Reserve Requirements was negative in influencing the lending rates, further studies on investor behaviors need to be conducted so as to determine subsequent effects on the lending rates need to be carried out.

5.4 Limitations of the Study

The Central Bank Rate was introduced in June 2006, thus there were limitation in data availability because of the comparatively short time frame in the implementation of the rate as a monetary policy tool. Consequently, the study concentrated on the period 2006 to 2014. This period was not exhaustive in assessing the effect of the selected

macro-economic variables on the lending rates. A wider time spectrum would provide a more reasonable assessment of the variables.

The study applied four independent macroeconomic variables, namely the Central Bank Rate, 91-Day Treasury Bill, Repo rate and the Cash Reserve Requirement in assessing their effects on lending rates. This therefore implies that the effects of the other macro-economic variables on lending rates were not captured by this research. Direct effects of inflation rates on the lending rates were not studied thus the study did not capture the relationships between inflation rates and lending rates. Any association between bank deposit rates and lending rates were also not involved in this study.

The data used in this study was secondary data which was primarily collected for other purposes. In addition, the changing working environment due to increased globalization, calls for an improvement in monetary policy tools application. Thus other factors in the economy such as income of consumers were not studied in this study. Their income influences the types of loans that they can borrow thus limiting the types of loan products by commercial banks.

Another limitation of the study include the fact that the inflation rates existing in the country have forced the Central Bank to raise its CBR rate which is being passed on loan borrowers in the form of higher interest rates. This means that the Monetary Committee has to frequently review the monetary policies to ensure a stable economy.

5.5 Suggestions for Further Research

The study period was for a relatively short time and hence further studies ought to be conducted for a larger time frame in the future so as to determine if these research findings reached hold under a more stable macro-economic environment in the long run. A wider time frame would also be imperative in highlighting any trend in the lending rates due to the various macroeconomic variables. Additionally, any patterns both cyclical and seasonal would be detected.

The Government through the Central Bank of Kenya has recently turned to the Kenya Bankers Reference Rate (KBRR) in formulating the cost of borrowing by lending institutions. This study therefore recommends that future studies examine the effectiveness of KBRR in managing lending rates.

This study only concentrated on the effects of four macroeconomic variables namely (Repo, CBR, 91-Day Treasury bill and Cash Reserve Requirement). Therefore, there is a necessity to address the impact of the other macroeconomic tools such as interest rates on lending rates. Effects of political upheavals would also be imperative in assessing trends in lending rates since it affects rate of investments in the economy.

The study recommends that studies ought to be conducted in Kenya on the connection that exists between monetary policies and economic growth in terms of investments so as to assess the appropriateness of monetary policies on the economy. Further studies on the various costing systems adopted by banks in pricing their lending rates ought to be conducted to assess the various factors that come into play in determining the lending rates. The appropriateness of those factors also should be determined so as to know whether banks actually overpriced their lending rates.

REFERENCES

- Aban, M., J. (2013). Transmission of Monetary Policy through the Bank Lending Channel in the Philippines. *International Journal of Trade, Economics and Finance*, 4(1), 37-42.
- Alfarez, F. Lucas, R. E. Jr & Weber, W. (2001). Interest Rate and Inflation, *American Economic Review*, (Papers and Proceedings) 91(2), 219-25.
- Aress, B., A. (2012). The Effect of Monetary Policy on Interest Rates in Kenya. Unpublished Thesis, University of Nairobi
- Bernanke, S. & Getler, M. (1995). *Inside the black box: the credit channel of monetary policy transmission* (No. w5146). National Bureau of Economic Research.
- Bernanke, B., & Gertler, M. (2000). Monetary Policy and Asset Price Volatility (No. w7559). National Bureau of Economic Research.
- Bernanke, B. S. (2002) *Asset-Price and Monetary Policy*. New York 15 October, BIS Review 59/2002.
- Bibow, J. (1998). Keynesian Theories of Liquidity Preference. *The Manchester School* 66 (2) 238-73
- Bibow, J. (2000). The Loanable Funds Fallacy in Retrospective. *History of Political Economy*, 14 (5)
- Brunner, K. & Meltzer. A. H. (1988). "Money, Debt and Economic Activity", *Journal of Political Economy*, 80, 951-977.

Central Bank of Kenya Monetary Policy Statements (2006-13)

Central Bank of Kenya Website: www.centralbank.go.ke

Central Bank of Kenya, Statistical Bulletins, December 2014

Chowdhury, I. Hoffman, M. & Schabert, A. (2003). Inflation dynamics and the cost channel of monetary transmission. *European Economic Review* 50(2006) 995-1016.

Cooper, & Emory, C. (1995). *Business Research Methods*. Chicago, Irwin.

Cooper, D. R. & Schindler, P. S. 2003. *Business Research Methods*. 8th Edition Singapore: McGraw- Hill/Irwin.

Crowley, J. (2007). *Interest Rate Spreads in English- Speaking Africa*. *IMF Working Paper*. April 2007, 123-45

Fell, P. C. (1996) The Role of Short Rates and Foreign Long Rates in the Determination of Long-Term Interest Rates, *European Monetary Institute Staffs Paper* no. 4, May 1996.

Gambacorta, L. & Mistrulli, P. E. (2004). Does bank capital affect lending behavior?. *Journal of Financial intermediation*, 13(4), 436-457.

Gertler, M. & Gilchrist, S. (2003). The role of Credit Market Imperfections in the Monetary Transmission Mechanism: Arguments and Evidence, *Scandinavian journal of Economics*, 95(1), 43-64.

International Monetary Fund (1996). World Economic Outlook, Washington DC, October.

Kleimeier, S., & Sander, H. (2006). Expected vs. Unexpected Monetary Policy Impulses and Interest Rate Pass-Through in Euro-Zone Retail Banking Markets. *Journal of Banking and Finance* 30 (7): 1939-70

Kobayashi T, (2008). Incomplete Interest Rate Pass-Through and Optimal Monetary Policy. *International Journal of Central Banking*, 4 (3), 77-119.

Kohn, D. L., & Brain P. S. (2003). *Central Bank Talk: Does it Matter and Why?* Federal Reserve Board Finance and Economics Discussion Paper 2003-55

Lee, W. & Prasad, E. (1994) *Changes in The Relationship between the Long Term Interest rate and its Determinants*, IMF Working Paper 94/124, Washington DC, 994.

Madura, J., (2003) *Analysis and Evolution of the Eurex Repo Market Model*. Unpublished MBA thesis Institution/ College Leopard-Franzens University, Innsbruck (Banking and Finance)

Markus K. B., (2009), Deciphering the Liquidity and Credit Crunch 2007-2008. *Journal of Economic Perspectives*, 23(1), 77-100

Mishkin A. K. (1995); *"The Economic of Money, Banking and Financial Markets"* Addition-Wesley 5th Edition.

Njiru., N., J (2014). Monetary policy and commercial banks lending rates in Kenya. Unpublished Thesis, University of Nairobi

- Patterson, B. & Lygnerud, K. (1999) *The Determination of Interest Rates*. European Parliament, Directorate-General for Research Working Paper
- Radecti, L. J. V. (1994) The Financial Linkages in the transmission of monetary policy in the United States. *National Differences in Interest Rates Transmission*, 291-337
- Stiglitz, J. E., & Weiss, A. (1981). Credit Rationing in Markets with Imperfect Information, *American Economic Review*, June, 393-410. Usman.
- Sun, P., & Sutcliffe, C. (2003). Scheduled announcements and volatility patterns: The effect of Monetary Policy Committee announcements on LIBOR and short futures And Options, *Journals of Future Markets*, 23, 773- 797.

APPENDICES

Appendix I: Lending Rates (%)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2006	13.2	13.27	13.33	13.51	13.95	13.79	13.72	13.64	13.54	14.01	13.93	13.74
2007	13.78	13.64	13.56	13.33	13.38	13.14	13.29	13.04	12.87	13.24	13.39	13.32
2008	13.78	13.84	14.06	13.91	14.01	14.06	13.9	13.66	13.66	14.12	14.33	14.87
2009	12.78	14.67	14.87	14.71	14.85	15.09	14.79	14.76	14.74	14.78	14.85	14.76
2010	14.98	14.98	14.8	14.58	14.46	14.39	14.29	14.18	13.98	13.85	13.95	13.87
2011	14.03	13.92	13.92	13.92	13.88	13.91	14.14	14.32	14.79	15.21	18.51	20.04
2012	19.54	20.28	20.34	20.22	20.12	20.3	20.15	20.13	19.73	19.04	17.78	18.15
2013	18.13	17.84	17.73	17.87	17.45	16.97	17.02	16.96	16.86	17	16.89	16.99
2014	17.03	17.06	16.91	16.7	16.97	16.36	16.91	16.26	16.04	16	15.94	15.99

Appendix II: Repo Rate (%)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2006	7.61	7.78	7.5	6.78	6.68	6.39	5.73	5.94	6.16	6.23	6.33	6.34
2007	6.43	6.75	6.7	6.84	7.03	7.07	7.19	7.49	7.81	7.44	6.42	7.13
2008	7.75	6.9	6.46	6.67	7.42	7.61	7.41	6.35	6.06	6.03	6.27	6.36
2009	5.1	5.08	4.62	4.05	6.18	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0	0	0	0	0	0
2011	0	0	1.66	4.5	5.72	5.73	0	0	0	18.89	0	17.75
2012	17.88	13.78	0	15.47	16.97	17.6	14.31	9.65	8.42	9.74	8.3	6.39
2013	6.6	9.1	9.35	9.14	7.96	7.93	7.48	0	7.11	0	0	7.95
2014	0	0	6.92	8.39	8.42	6.46	0	12.95	8.39	8.39	8.17	8.29

Appendix III: 91-Day Treasury Bill (%)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2006	8.23	8.02	7.6	7.02	7.01	6.6	5.89	5.96	6.45	6.83	6.41	5.73
2007	6	6.22	6.32	6.65	6.77	6.53	6.52	7.3	7.35	7.55	7.52	6.87
2008	6.95	7.28	6.9	7.35	7.76	7.73	8.03	8.02	7.69	7.75	8.39	8.59
2009	8.46	7.55	7.31	7.34	7.45	7.33	7.24	7.25	7.29	7.26	7.22	6.82
2010	6.56	6.21	5.98	5.17	4.21	2.98	1.6	1.83	2.04	2.12	2.21	2.28
2011	2.46	2.59	2.77	3.26	5.35	8.95	8.99	9.23	11.93	14.8	16.14	18.3
2012	20.56	19.7	17.8	16.01	11.18	10.09	11.95	10.93	7.77	8.98	9.8	8.3
2013	8.08	8.38	9.88	10.38	9.46	6.21	5.92	10.03	9.58	9.72	9.94	9.52
2014	9.26	9.16	8.98	8.8	8.82	9.81	9.78	8.29	8.38	8.67	8.64	8.58

Appendix IV: Cash Reserve Requirement (%)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2006	6	6	6	6	6	6	6	6	6	6	6	6
2007	6	6	6	6	6	6	6	6	6	6	6	6
2008	6	6	6	6	6	6	6	6	6	6	6	5
2009	5	5	5	5	5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
2010	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
2011	4.5	4.5	4.5	4.5	4.5	4.75	4.75	4.75	4.75	4.75	4.75	5.25
2012	5.25	5.25	5.25	5.25	5.25	5.25	5.25	5.25	5.25	5.25	5.25	5.25
2013	5.25	5.25	5.25	5.25	5.25	5.25	5.25	5.25	5.25	5.25	5.25	5.25
2014	5.25	5.25	5.25	5.25	5.25	5.25	5.25	5.25	5.25	5.25	5.25	5.25

Appendix V: Central Bank Rate (%)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2006	0	0	0	0	0	9.75	9.75	10	10	10	10	10
2007	10	10	10	10	10	8.5	8.5	8.75	8.75	8.75	8.75	8.75
2008	8.75	8.75	8.75	8.75	8.75	9	9	9	9	8	8	8.5
2009	8.5	8.5	8.25	8.25	8	8	7.75	7.75	7.75	7.75	7	7
2010	7	7	6.75	6.75	6.75	6.75	6	6	6	6	6	6
2011	5.75	5.75	6	6	6	6.25	6.25	6.25	7	11	16.5	18
2012	18	18	18	18	18	18	16.5	16.5	13	13	11	11
2013	9.5	9.5	9.5	9.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
2014	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5

Source: Central Bank of Kenya