THE EFFECT OF INTEREST RATE ON BORROWERS UPTAKE OF CREDIT FACILITIES IN COMMERCIAL BANKS IN KENYA

BY

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DECLARATION

This research proposal is my original work and has not been presented for any award to any examination body.

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DEDICATION

This work is dedicated to my dear husband Ibrahim and my two sons Bradley and Joel for their invaluable support in my studies. To my dad Solomon and mum Catherine for their inspired counsel to always do my best in this journey of academics and life. I love you all for giving me the courage and determination to wither the storms of the course. God Bless You.

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LIST OF ABBREVIATIONS

CBD   Central Business District

CBK   Central Bank of Kenya

CBS   Central Bureau of Statistics

CEO   Chief Executive Officer

CRM   Customer Relationship Marketing

GDP   Gross Domestic Product

GOK   Government of Kenya

ICT   Information and Communication Technology

KBA   Kenya Bankers Association

SPSS   Statistical Package for Social Sciences

UON   University of Nairobi

ABSTRACT

This research study aimed to establish the effect of interest rate on borrowers' uptake of credit facilities in commercial banks in Kenya. Commercial banks play a vital role of provision of credit facilities to corporate organizations, businesses and individuals. Despite the intervention of Central bank of Kenya, interest rate offered by commercial banks has remained significantly high therefore influencing uptake of credit facilities by potential borrowers. This study employed descriptive statistics and a multiple regression model was used. Secondary data was gathered by a review of existing materials on the topic under study and the Kenyan banks. The study covered a period between 2005 to 2014 The study findings established interest rates, level of deposits and inflation are significant in the uptake of credit facilities. Interest rates have a significant impact on borrowers uptake. This result is against the inverse economic relationship between interest rate and credit facilities. Inflation is significant in explaining the variation in the borrower's uptake though the effect is negative. Deposit volume is a significant determinant of borrower's uptake and the relationship is positive which demonstrates the price in elastic demand of loanable funds. However, the government should intervene to monitor interest rates and maintain it at reasonable levels. It is evident from the study that potential borrowers uptake of credit facilities is not only determined by the price commercial banks charge for the loans and advances they offer. These factors could be the accessibility of credit facilities and the need or purpose that potential borrowers intend to utilize the funds advanced for. If the funds are for investment purposes and the cost of the funds is outweighed by the returns then potential borrowers will go ahead and access credit. If the funds on the other hand are for financial smoothing which must be fulfilled at whatever cost then the price charged by financial institutions will not be of much consideration to potential borrowers.

CHAPTER ONE

INTRODUCTION

1.1   Background of the Study

Commercial banks are financial intermediaries who perform a brokerage role of mobilizing economic resources from surplus units to deficit units. Commercial banks act as a link between depositors and potential borrowers. For commercial banks to perform this economic role they must generate sufficient income to meet their operational costs (Hara, 1983). Commercial banks are providers of funds for both investing purposes and financial smoothing purposes. By playing this vital role, It is important to note that financial performance of commercial banks is directly linked to growth and progress of an economically healthy nation (Wainaina, 2013).

Interest rate is the price offered by a lender or Commercial bank for use of advanced funds. Money is an asset that is not only acceptable as a medium of exchange across economies but also acts as a store of value (Crowley, 2007).Kithinji & Waweru (2007) view interest rate as "rent of money." Interest rate aids in determining the current market and also gives information about future inflation (Ndung'u, & Ngugi, 2000). According to Sologoub (2006) highlights that high which demonstrates inefficiency in the role of intermediation played by Commercial banks. Therefore, it can be concluded that interest rate spread is sufficient to act as a measure of intermediation efficiency among commercial banks. Interest rate spread is defined as the difference between lending and deposit interest rates. This spread is beneficial to a country in determining the financial efficiency (Hassan & Khan, 2010). Alternatively, a high

interest rate spread could mean unusually low deposit rates discouraging savings and limiting resources available to finance bank credit (Mustafa & Sayera, 2009).

In accordance with Keynesian economics, the relationship between consumption and income is considered key. The marginal propensity to consume increases with increases in income increases but the increment is not equivalent to the increment in income. This consumption behavior goes ahead to explain that as income increases savings also increase. Schmidt & Kropp (1987) blames Commercial banks' lending policies for the common problem of credit accessibility. The type of policies implemented by lending institutions will act a barrier to potential borrowers for accessing different types of credit facilities. Some of these policies include the interest rate applied on credit facilities, credit repayment history of the borrowers, type of tangible collateral required, loan processing period and cost and purpose of the loan applied. When the Commercial banks employ stringent lending policies that hinder accessibility potential borrowers will not apply for credit facilities even though they demand for it.

There is a common belief that volatility in interest rates influence financial performance of commercial banks. According to Samuelson (1945), generally as interest rates increases, bank profits will also increase. He argued that a rise in interest rate helps the performance of the banking system as a whole. More precisely, the volatility in interest rate depends on how sensitive the bank's assets and liabilities are to current market rates.

1.1.1 Interests Rates

Interest rate can be viewed as the price paid for use of loaned funds. Not only is money considered an asset that is widely used as a store of value but also as a generally accepted medium of exchange. Individuals and institutions who lend money expect a form of compensation for transferring over their claims in a given period to borrowers. This form of return is the interest rate that also compensates for credit risk. Therefore those who lend money expect to be compensated for handing over their claims for the period of the loans to those who borrow money. This interest rate also covers the exposure to credit risk by lenders. Therefore, it is widely acknowledged that interest rate can be viewed as the price that lenders expect borrowers to pay for the exchange of current entitlements for future entitlements. Interest rates represent the cost of money (Kimutai, 2003).

One of the importance of Interest rate is the impact it has in an economy in the control of flow of money. The higher the interest rates the slower an economy is due to curbed inflation. Low interest rates fuel the economy, but could also lead to high inflation. When interest rates in an economy are high, borrowers uptake of credit facilities will be low due to the higher monthly repayment obligation. This will in turn negatively affect real asset prices and purchases. The opposite is also true, Lower interest rates are favorable to a consumer. When interest rates are low, potential borrower would take up more loans and this would lead to decrease in price as the market for real assets improves (Ingram, 2011)

The relationship between interest rate and profitability has been difficult to ascertain. Instability in interest rate affects financial performance of Commercial banks. High

interest rates charged by Commercial banks result to high interest income. However, the higher interest income can be crowded out by low demand of loans resulting from high interest rate charged. Domestic and external investors will shy away redirect investments in other economies in conditions of unstable interest rate. Evidence of investment behavior highlights that instability of macro-economic variables negatively affects private investment over and above the conventional factors (Sayedi, 2013). Consequently, instability in the macroeconomic variables would slow down lending in commercial banks which would in turn hinder the role of commercial banks to generate revenue and remain profitable (Gilchris, 2013).

In conclusion, Interest rate volatility ominously affects performance of Commercial banks. Commercial banks vital role in an economy is economic resource allocation.Channelling of funds from depositors to investors can only be carried out by Commercial banks when they are profitable enough to meet their operational costs. Although the relationship between interest rates and profitability is not the easiest to prove, there is a clear indication from past studies that poor financial performance of commercial banks is attributed to interest rates instability in elastic loan markets since high interest rates reduces the demand for loans (Gilchris, 2013).

Interest rate is the fee charged by a lender or commercial banks on borrowed funds and alleged to be "rent for money". Interest rate is a rate articulated as a percentage and normally for a period of one year (Sayedi, 2013). Interest rate is computed from macroeconomic factors and is an indication of future inflation in the open market. The macroeconomic factors include employment levels and total output among others (Karl, Ray, & Shannon, 2009).

1.1.2 Credit Uptake

The global credit uptake from commercial banks by low income earners and poor households was estimated to increase to 79 percent in 2009 and is expected to keep increasing (Bonalos, 2009). Emergence of technology and increased competition has enabled commercial banks and other formal institutions to offer efficient and more reliable credit facilities. Nowadays therefore savings and credit cooperative societies despite their size are facing challenges in maintaining their members due to improved services of commercial banks (Wanyama, 2008).

Increase in population and levels of per capita income of households have a resultant increase in demand for financial services especially for credit facilities in Commercial banks. Banks have become a significant pillars of economic development of countries in developed and developing economies (World Bank, 2013).Bank customers often attribute the cost of credit as a hindrance in accessing formal credit. This has led to alternative credit sources of credit like 'chamas'and investment groups which offer lower cost of credit to potential borrowers. Other factors that affect borrowers uptake for credit facilities offered by Commercial banks also include range of bank products, extensive branch network and transaction costs (Allen, 2013).

1.1.3 Interest Rate and Borrowers Uptake of Credit Facilities in Commercial Banks

Demand and supply of funds offered as loans by financial institution is a primary determinants of interest rates and its resultant effect on credit demand and uptake. Commercial banks act as brokers linking savers to borrowers. Commercial banks intermediation role of acting as a go between of suppliers and borrowers of loanable

funds greatly influences activities of commercial banks. Interest rate is determined by the price borrowers are prepared to pay and lenders ready to accept. On the demand side of the market, it can be safely said that the demand for loans and therefore uptake is a derived demand (Brueggeman, 2010).

Commercial banks intermediating role of acting as a go between of suppliers and borrowers of loanable funds greatly influences activities of commercial banks. Profitability reported by Commercial banks is attributed to the interest rate spread. Pyle (1971) argues that the larger the range between deposits volumes and loan book, the easier it is for banks to carry out their intermediation role. Earlier explanations asserts that for a positive spread to be maintained, commercial banks need to be able to minimize transaction costs in loans origination process.

1.1.4 Commercial Banks in Kenya

Central Bank is the regulatory authority governing the activities of the banking sector in any economy. In Kenya, Central Bank of Kenya is mandated to regulate the activities of Commercial Banks and other non-banking financial institutions under Banking Act, Cap 488. In 2013, 48 financial institutions comprised the Kenyan banking sector (Central Bank, 2011).Currently commercial banks are under one umbrella that lobby for its interest as well as those of its members the Kenya Bankers Association (KBA) (Central Bank, 2013).

The vital role played by Commercial banks in an economy is the economic resource allocation. This is accomplished by channeling funds from depositors to potential borrowers/investors continuously. This vital role can only be achieved   if sufficient

income is generated to cover their operational cost incurred. In other words banks need to be money-making. Other than the agency role, performance of commercial banks impacts economic growth of countries. Shareholders' investment is rewarded by sound financial performance which encourages additional investment and brings about economic growth. While, banking failure and crisis cause by poor financial performance will lead to negative consequences on economic development (Panayiotis et al., 2006).

Commercial banks offer custodianship of depositor's funds and operate by receiving cash deposits from the general public and loaning them out to the needy at statutorily allowed interest rates. Loans are based on the credit policy of the bank that is tightly coupled with the central bank interest rate policy. These in effect determine the level of financial risk in a particular bank (Central Bank of Kenya, 2010).

Commercial banks are encouraged to offer high interest rate by the common conception of 'price inelastic demand' especially among the less priviledged.It is argued that this class of people is insensitive to rate of interest. The poor are willing to be charged a higher interest rate to whenever they can access the loanable funds they seek from financial institutions (Karlan & Zinman 2008). The scholars measured the effects of interest rate fluctuations on uptake of credit facilities by potential and existing customers. According to their study findings, it was established that lower interest rates produced more borrowing; and that higher rates reduced repayment.

Lending and deposit rates are important variables for commercial banks. Whenever deposit rates are low savers would be discouraged to hold savings with banks due to

the expected low returns. This will affect liquidity of commercial banks and their ability to perform their core business of lending. One of the primary functions of borrowed funds is to facilitate investment. Therefore ultimately viable investment opportunities will not be embarked on and thus limiting the economy's future growth potential (Shaw, 1973).

1.2   Research Problem

Interest rate unpredictability has adverse impact on borrowers uptake of credit facilities posing challenge to commercial banks managers in their core function of credit management and profitability (Baum, Mustafa & Neslihan, 2009). The volatility on interest rates is blamed on poor macroeconomic policies which include unwarranted government spending, high inflation, and overvalued exchange rates. Detrimental macroeconomic policies are at times intentional since politicians believe that they are good for sound economic performance. In fact, when formulating macro-economic variables, the effect of the policies on commercial banks performance is usually not a consideration (Williamson, 1990).

According to Mcloughlin (2013), research findings states that for some time, policymakers prefer commercial banks to charge high unstable interest rates. These high rates eat away at any net gain that borrowers would have generated. According to Dehejia, Montgomery & Morduch (2012) they concluded that high interest rates can undermine credit uptake by borrowers and the effects are noticeable.

Though some studies highlight the negative impacts attributed to high interest rate, Stewart et al (2010) point out that, these effects are scarcely discussed. Existing

literature concerned has largely dwells on a supply-side perspective and left limited writings on the effect of interest rates fluctuations from the demand for credit (or credit elasticity).The limitation of available literature concentrates on two issues: impact of high interest rates from borrower perspective, and the effects on over-indebtedness. The research findings are country-specific case studies which hinder applicability in some countries due to diverse macroeconomic structure.   Recent assessments on the impact of credit on consumers have had little to say about the role that interest rates play, as this has not been a keen focus on the research gap for these studies.

Bandiera*et al* (1999) noticed that in the 1980's many developing countries during the wave of liberalization allocated credit by use of market forces that determined the interest rate freely. 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 fluctuations in interest rates and unpredictability on the incidence of the next rate of interest, lead to unpredictability in various macroeconomic variables like investment, savings, output, employment, aggregate demand and consumption in the economy. Uncertainty surrounding future incidence of the interest rate and profitability following the rapid financial liberalization initiatives led to volatile fluctuations in interest rates, high (to protect against losses),irregular, inconsistent and un-predictive rates for interest on loanable funds. It also became difficult to predict the rate of interest that will be charged, when making borrowing decisions.

Terms of a loan are determined by the ability of lenders to assess credit worthiness of a potential borrower through information shared on credit bureaus. According to Munene (2009) this determines the repayment ability and interest rate charged by lenders. Bett (2013) investigated contribution of lending interest rates on SACCOS performance in Kenya. His key finding was that lending interest rate of commercial banks is positively correlated with profitability. This implies that interest rate and profitability move together without impacting adversely demand of loanable funds.

Therefore from global and local studies conducted on interest rates and credit uptake, there is evidence of mixed result on the effect of interest rate on credit facilities uptake. Also, despite intervention of the central bank on the interest rate payable on credit facilities, interest rate has persistently remained high barring many households from applying for loans. Thus, this study pursued to extend and fill the research gap by investigating the effect of interest rate on credit facilities uptake in Kenya and therefore answer the research question on how interest rate single handedly affects credit uptake in Kenya.

1.3   Objectives of the Study

This study aims to establish the effect of interest rate on borrowers' uptake of credit facilities in commercial banks in Kenya.

1.4   Value of the Study

Study findings and results will offer substantial information to commercial banks in Kenya especially the credit divisions on how interest rates affect credit uptake. The information will be useful in their pricing strategies to improve on the performance of

credit facilities on the prevailing market rates. The findings of this study will enable potential borrowers make knowledgeable decisions on the interest rates to be applied on credit facilities commercial banks and the appropriate loan sizes to apply for. Further, the findings will also benefit the monetary policy makers on how interest rate affects credit uptake in Kenya. The study will also add to the existing literature on credit facilities uptake and performance. This will expose research organizations and scholars to more information in this topic. Finally, the study will aid different researchers to identify gaps in the existing research and go on board to conduct further investigation in those areas.

CHAPTER TWO

LITERATURE REVIEW

2.1   Introduction

This chapter firstly discusses underlining theories on interest rates. Secondly, a relationship of interest rates and credit facilities uptake is analyzed on the empirical studies. The summary and conclusion on literature reviewed is indicated thereby identifying the research gap.

2.2   Theoretical Review

This section will explore a few theories that endeavor to explain the effect of interest rates and the applicability of these effects in forecasting future changes.

2.2.1 Classical Theory of Interest Rates

This theory is also known as the demand and supply theory was propounded by the economists Marshall and Fisher in the early 1930s. Later on, Pigou, Cassel, Knight and Taussig worked to modify the theory. The theory determines interest rate by use classical theory of economics. Interest rate is defined as the element that compares savings to investment. The theory explains interest rate as a point of equilibrium created by an intersection point of supply of savings and borrowing demand curves. Therefore when savings exceed investments the rate of interest will fall, and when investments exceed savings rate of interest will rise until equilibrium is attained. The increase in interest rate (reward) will encourage savings (Gorder 2009).

Other advocates of the classical theory of interest have a different opinion. According to Marshal, interest rate can be viewed as the price paid for the use of resources. Rate of interest is determined by a point of intersection between supply savings curve at fixed income level and demand of capital at varied rates which will in turn influence the marginal propensity to save. However, this theory fails to take into account other factors besides supply and demand. These other factors such as income and wealth also have a significant impact on interest rate determination

2.2.2 Keynes's Liquidity Preference Theory

This theory is based on the economic growth theory which was developed by J.M. Keynes in 1891. Value for holding money is for both the transactionary motive and as a store of wealth. It is assumed that people will forego interest to be earned on money held presently and instead have it in hand as a precaution. An increase in interest rates will mean more profit and thus unwillingness to hold money presently (Keynes, 1936). Long term securities are perceived to be more risky and therefore force investors to demand high premiums. A small change in interest rate leads to a significant change in speculative demand for money. Unlike transactionary demand, speculative demand is not a stable function of income (Carpenter & Lange, 2002).

The theory emphasizes that people will always to hold cash for immediate consumption. A premium will be demanded whenever an investment in non-liquid assets for instance bonds is preferred .This premium increases with increase in the investment period (Auerbach, 1988).

2.2.3 Rational Expectations Theory

The originator of this theory in the early 1960s was John F. Muth.Some earlier economists such as A.C.Pigou, John Maynard Keynes and J.R.Hicks expectations was not new to them. Keynes believed that economic activity could be explained by optimism and pessimism waves. Future opinion on interest rates is based on the current information available in the market. Determination of future interest rates can be based on all the information on the current spot rate. The theory further explains that any unexpected changes in the economic factors will lead to changes in the future rates of interest (Gorder, 2009)

Investors are assumed to be profit maximizers with picture-perfect knowledge of future rates. They incur zero cost while trading and holding. The theory concludes that future long term interest rate is derived as a mean of short term bond rates and always move in the same direction but the latter having higher fluctuations.

2.2.4 Loanable Funds Theory

In the 1930s, Dennis Robertson and Bertil Ohlin formulated the theory. The theory. However, other economist that contributed to the doctrine included Erik Lindahl, Knut Wicksell and Myrdal. Interest rate is equated to an intersection between loanable funds supply and credit demand. An inverse relationship is assumed to exist between the loanable funds and the interest rates.Loanables funds are determined by government, foreign borrowing, consumers and domestic business. Supply on the other side is derived from foreign lending and domestic savings. The economy's financial and monetary situation help in reaching short and long term interest rates (Gorder 2009).

Funds available for lending are largely influenced by the saving behavior of individuals and money supply additions through creation of credit by bank during a particular period (Turnovsky, 1985). Theory assumes that at equilibrium, banks savers and borrowers should be well compensated. Interest rate spread should be at a point where all parties' comfortable (Emmanuelle 2003).The theory assumes that constrained savings limits credit supply that is meant to finance investment opportunities.

2.3 Determinants of Borrowers Uptake of Credit Facilities in Commercial banks

2.3.1 Interest rates

Interest rates are influential in motivating the credit market and access to credit. The rates are set by the Monetary Policy Committee (MPC) and its movements have a differential impact on the credit market and/or default (Wambui, 2013). According to Kenya Bankers Association, interest rates can either be variable or fixed rates. Just as the name suggests variables rate fluctuate in the entire duration of a loan depending on the market conditions while fixed rates are held constant for the entire loan period.

Forces of demand and supply play an instrumental role in the determination of interest rate just like the case of any other price determination in the market. The intersection of supply and demand of credit will determine the rate of interest to be applied (Ngugi & Kabubo, 1998). At a point of equilibrium the determined price will be relatively stable and will tend to increase or decrease if demand exceeds supply and vice versa.

According to Pandley (1997) borrowers demand for credit is driven by the desire to spend and invest while supply of credit is purely from savings.

2.3.2 Level of Deposits

Deposits provided by the bank customers and the public at large are the cheapest source of funds that Banks have access to. By acquiring cheaper funds for lending, banks can maximize profitability especially when the demand for loans is very high. High deposit level will enable banks offer more loans and eventually make more revenue. On the other hand even with high deposits banks earnings could decrease as a result of low demand for loans. Consequently banks will pay interest for holding deposits either as fixer or call that are not being put to use (Buyinza, 2010).

An efficient banking system would be beneficial to the real economy. Extending higher returns to savers and reducing borrowing costs to potential borrowers and investors will have significant impact in an economy. Therefore, if an economy's banking sector is characterized by a high interest rate spread savings would be discouraged by the low returns realized by savers thus limiting the financial surplus needed for external financing. Due to the high costs incurred by banks in performing their intermediation role, only a smaller portion of the mobilized bank deposits would be channeled to external financing thereby limiting lending which in turn impacts investment and economic growth (Valverde, 2004).

2.3.3 Inflation

Consumer price index is generally used in Kenya as an inflation measure. Inflation is a measures of changes in prices for products in an economy that account for the highest amount of household expenditure According to Modigliani & Lessard (1974) they argued that the expectation of inflation and inflation itself will trigger high interest rates which will in turn raise the monthly repayment premium for loans advanced. The increase annual loan payment will eventually decrease the purchasing power of households.

This higher interest rate charged as a result of inflation will increase the annual loan repayment but not necessarily increase the total cost of credit in complete terms. This is because gradual decline in the house hold debt purchasing power will offset the consequences of the escalation in interest rate (Modigliani & Lessard, 1974). The rise in loan costs coming about because of inflation importantly affects the time profile of the flow of yearly installments. Assuming fixed repayment amounts during the loan tenor the effect of inflation will be a rise in the repayment amounts during the initial years of the loan followed by a reduction in the level of real payments in the later years.

Instability in inflation destabilizes the accessibility of credit funds available in an economy by creating disequilibrium in this market. Studies conducted previously on the uncertainty caused by inflation on the credit market reveal different outcomes (Ingersoll & Ross 1992).Dixit (1994) agree that instability in real interest rate and price discourages potential investors who tend to choose the option to delay in venturing into investment opportunities in a country. Landskroner & Ruthenberg

(1985) and Miller (1992) also seconded that uncertainty in an economy inflation rates increases bank costs which negatively impacts total credit.

2.4 Empirical Review

Interest rates instability in Commercial banks results to reduced financial performance. Both domestic and foreign investors will shy away from investing in economies that are categorized by instability in interest rates. This will eventually delay spending in an economy (Sayedi, 2013). Although a direct relationship between interest rates and profitability has been difficult to ascertain, studies confirm that interest rates instability affects credit uptake.

A study by Owoeye & Ogunmakin (2013), on the predictors of the lending behavior of Nigerian Banks shows that volume of deposits, foreign exchange, investment portfolio; minimum cash reserve ratio, lending rate, liquidity ratio and GDP. An analysis of 1980 to 2005, the vector error correction estimates indicate that the rate of lending from commercial banks increased significantly from 3 percent to 57 percent, while the coefficients of liquidity ratios have significant impacts upon the size of the loan book, the coefficients of lending rate and minimum cash reserve ratio were insignificant implying that monetary policy instruments do not affect bank lending volumes in Nigeria. The study does not, however, consider collateral as one of the explanatory variables; thus it is not possible to tell the impact of collateral requirements on the bank lending behavior and if collateral is a determinant of loan uptake in Nigeria.

A study on the factors determining exchange rates and their impact on Commercial banks performance was discussed by Otuori (2013). A high correlation between exports and imports Interest rates, inflation and exchange rates was noted. By influencing interest rates, central banks could manipulate inflation and exchange rates Foreign investment and capital would be attracted by high interest rates due to higher return and eventually cause an increase in the exchange rate.

High cost of credit is an impediment to access of credit by bank customers in Kenya. This has led to sourcing of cheaper form of credit from investment groups, Chamas,Saccos and shylocks (CBK, 2012). Deposit rates offered by commercial attract customers when opening saving accounts. Kenya Commercial banks have a tendency of offering low deposit rates on savings and at the same time price loans expensively. On average, Banks in Kenya offer 6|% as deposit rate and charge a markup of 11% on the lending rate which is based at 17% (World Bank, 2013).

There is need to investigate whether demand for financial services in developing economies is driven by prices or other factors. Developing countries have a significantly large informal sector which is driven by un-institutionalized capital which fast tracks financial development in the evolving markets. However; the demand for financial services is relatively low at the current market price. More so the alternative financial markets are also effective enough to benefit the needs of consumers. In this view the products and services offered by the formal banking sector can no justify the high cost charged by the players in this market (Beck, 2010).

Other studies reveal that borrowers individual characteristics such as income level, education levels and credit repayment history affect the borrowers uptake of credit facilities in commercial banks. Demand for informal financial services has a positive and significant demand impact on asset holdings (Bensako, 2010).It is believed that the ability of potential borrowers to access land that acts as collateral for credit facilities increases the likelihood of using financial services (Beck, 2008).

Another study by FSD-K (2009) indicates that land-related assets are the most utilized as collateral in Kenya. Land system in Kenya has its unique challenges, making clearing of the said asset quite slow and costly. For example to create and perfect a building in to secure a loan of Ksh.10,000,000 in Nairobi would cost a total of Ksh.577,995 or 5.78% of the loan amount and sixty working days , this will lead to a longer time for the loan to be approved. Due to the high cost and time associated with creation of collateral means that this expense is transferred to the borrowers. Although there are measures being implemented by various stakeholders to remove these inefficiencies, they are likely to take a longer period to bear outcome and cannot promise an immediate solution to the policy concern of high cost of credit in the country.

Demand for money among the poor is perceived to be price amongst policy makers. This assumption encourages micro finance institutions(MFIs) and commercial banks to charge profitable interest rates on the basis that the high interest rate would not deter poor people from applying for credit facilities (Karlan & Zinman,2008).Reduced repayment ability was an effect of high interest rates while a lower interest rates influenced more borrowings among South African lenders.

Previous credit rationing studies on the borrowers' uptake of credit facilities in Commercial banks stipulate that credit rationing does not single handedly influence demand and uptake of credit services. Other factors for instance the motivation of purpose of applying for a loan greatly influences demand of credit services both in the formal and informal banking sector (Atieno, 2007).

Other studies view that financial illiteracy is a significant barrier to borrowers uptake of credit facilities in commercial banks other than the cost of borrowing. If a potential borrower is not familiar or aware of a product or service offered they will not demand for it. Households and consumers who are financially illiterate borrow at high costs and have low savings as opposed to the literate consumers (Lustradi, 2006).

Experts do agree that high interest rates makes repayment of loans difficult for poor people (Field & Torero, 2006). However, in reality, little evidence demonstrates these effects. How and in what ways high interest rates negatively affects the poor people is still unclear. While some studies suggest negative consequences of high interest rates, generally, there is lack of broad studies to draw a conclusion (D'Auria, Foglia & Reedtz, 1999). Fernando (2006) asserts that commercial banks justify charging of high interest rate to transaction and operational costs while advancing smaller loans. Others justify the high interest rates charged on loans by arguing that they need to be sustainable in an otherwise competitive market (Stiglitz, 2000).

According to Ewert et al. (2006) study in Germany on the determinants of bank lending performance using credit file information of 260 medium-sized firm

borrowers for the period 1992-1998. The study aims at testing the several theories relating collateral and loan processing period to interest rate premiums and therefore lending performance, using a random effects model on panel data analysis to eliminate the borrower and time-specific effects. Two models were estimated with interest rate premiums and probability of distress as the two predicted variables .Interest rate premium was set to be predicted in a random effects model by among other variables: collateral, loan thresholds and banks time in processing credit. The highlight of this study finding was that interest rate premium increased with rise in the collateral pledged. This was contrary to the signaling theory, where we would expect higher interest rate premium for firms pledging little or no collateral. However, estimation of distress probabilities of the same firms revealed that more collateral and covenant in credit contracts lead to lower distress probabilities. Combining the above results, the study gives controversial finding that riskier credit contracts are assigned lower interest rate premiums by banks.

It is imperative to note that demand of financial services by household has shifted from the typical perspective of loans and advances offered by commercial banks to other demands for instance demand for saving services. Consumers prefer other services than just credit services such as interest earning deposits demand, short term credit facilities and insurance demand (Armendiaz, 2005). Demand for credit is viewed as source for income generation and financial smoothing. This will fill the gap between savings and investment (Zeller, 2005).

According to the existing literature on demand for financial services, there is limited correlation among developing countries.Diagne & Zeller (2001) noticed that the

accessibility financial services is determined by the affiliation between lenders and borrowers. This relationship effects not only determines access but also the amount of interest rate to be charged. A closer an organization is to a financial institution the better terms of credit it can negotiate like cost of credit and applied rate of interest. The information acquired by borrowers from the industry they operate from also helps the entrepreneurs make informed decisions to reduce the risk levels (Nkurunziza, 2005).

2.5 Conceptual Framework

One of the objectives of a conceptual framework is to classify and explain concepts relevant to the study and plot relationships between the concepts as well as defining how variables interrelate. Figure 1 below gives an illustration of the relationship between interests rates which is the independent variable relate with the borrowers uptake of credit facilities in commercial banks in Kenya which is the dependent variable.
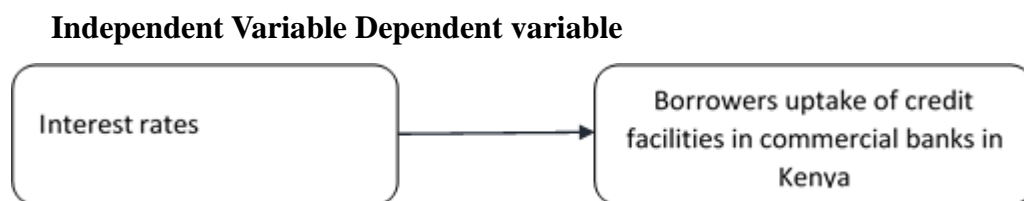
Independent Variable Dependent variable

Interest rates → Borrowers uptake of credit facilities in commercial banks in Kenya

Figure 1: Conceptual Framework

2.6   Summary of Literature Review

Critiques of the existing literature on borrowers uptake of credit facilities in commercial banks is thus; A shortage exists in the African region banking sector on empirical data (Allen, 2013).Comparison among various studies on African banking sector is difficult. This is due to the contradicting difference in terms and meaning used which creates confusion. There is also a challenge with the availability of panel data in Africa. Different studies employ different research instruments which creates lack of similarity during comparison. However, recent studies have tried to harmonize data during analysis (Beck, 2010).

Various studies have compared informal and the formal financial sector and have narrowed to the demand of one financial service to another (Schindler, 2007). However, limited study has investigated the role of interest rate on borrowers' uptake of credit facilities in commercial banks in Kenya. Literature review demonstrates some theoretical and empirical gaps that advocate for this study. The clear and direct link between the relationship between interest rates and credit demand charged in commercial banks is not very clear. This research will fill in the research gap by explaining how interest rate single handedly impact uptake of credit facilities in commercial banks.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter outlines the research design and methodology that was applied in conducting this study.

3.2 Research Design

The research employed descriptive research design that helps in gathering information about the existing status of the phenomena. This method was used because it addresses the objective of the study in investigating the relationship between the variables of the study (Kothari, 2008). Descriptive design considers aspects like sample size in relation to the target population, dependent and independent variables under the study, research approaches and data collection methods. Correlation method was employed to determine interdependency between interest rates and uptake of credit facilities .Interest rate by establishing correlation coefficients between the variables

3.3 Population

All commercial banks in Kenya within Nairobi County were targeted in this study. The Central Bank of Kenya listed a total of 43 commercial banks as at June 30th2015, However, 1 bank is under statutory management have been placed under receivership and 1 placed under liquidation. (Central Bank of Kenya, 2015).

3.4 Data Collection

Secondary data was collected and used to investigate the relationship between dependent and independent variables. Quarterly data ranging from 2005 to 2014 was collected from Commercial banks financial statements and Central Bank of Kenya.

3.5 Data Analysis

A descriptive analysis technique was employed to analyze data. This includes the use of tables, charts, graphs, percentages and frequencies (Mugenda & Mugenda, 2008). A multiple regression model: the relation of one dependent variable to multiple independent variables. The regression output was obtained using the Statistical Packages.

3.5.1 Analytical Model

The multilinear regression model used was be;

$Y = \alpha + \beta 1 X_1 + \beta 2 X2 + \beta 3 X_3 + \varepsilon$

Where:

Y=**Natural log of Credit facilities uptake;** Credit facilities uptake is the volume of loans obtained by borrowers in commercial bank.

Credit facilities uptake was measured by total value of loans and advances taken on a quarterly basis in Commercial banks in Kenya.

α=Constant term.

X1=**Interest rate**; Interest rate is the fee charged by commercial banks on borrowed Aggregate quarterly interest rate charged on by Commercial banks was used as the measure in this study.

X2=**Inflation;** The percentage change in Consumer Price Index (CPI) on a year to year basis

X3=**Natural log of Level of Deposits**; Deposits are a liability to Commercial banks. Level of deposits will be measured by the total value of deposits held on a quarterly basis by Commercial banks.

ε = Error Term.

Analysis of variance (ANOVA) was used to test the significance of the overall model at 95% level of significance. Coefficient of correlation (R) and Coefficient of determination (R2) will be used to determine the level of interdependency between the variables under study.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

Data findings and analysis in form of tables, figures, and inferential statistics is presented in this chapter. Quarterly data obtained from commercial banks was investigated using descriptive statistics

4.2 Response Rate

The study targeted 43 commercial banks offering credit facilities to their clients in Kenya between the period 2005 and 2014 based on the quarterly data. The data was obtained from a sample of 27 commercial banks offering credit facilities and this made a response rate of 62.79%. The response rate is considered adequate for statistical inference (Mugenda & Mugenda, 2003).

Table 1: Response rate

Response Rate	Frequency	Percentage
Response	27	62.79%
Unresponsive	16	37.21%
Total	43	100%

Source: Research Findings

4.3 Data Analysis and Findings

Descriptive and inferential analytical techniques were used in data analysis. Analysis employed ordinary least square technique. Descriptive statistics and correlation analysis was conducted to ascertain the behavior of the variables.

4.4 Descriptive Statistics

Table 2 below provides statistical summary of the data used in the model where mean, standard deviation, maximum and minimum values were measured. Mean established the average value of the data and how each observation deviates from its mean.

Table 2: Descriptive Statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Borrowers uptake(000,000)	27	18781.6230	264617.2740	78800.840533	69158.2219450
Deposit Volume (000,000)	27	247734.0485	576441.0585	346007.70787	65828.5235538
Inflation (%)	27	3.3300	29.1300	11.118864	6.5100253
Interest rate (%)	27	5.8800	18.0000	9.036136	2.6993610
Valid N (list wise)	27				

Source; Research Findings

The mean of the borrower's uptake for the 27 commercial banks during the study period is approximately Kenya Shillings 78.8 billion with each banks lending deviating from the mean by Kenya Shillings 69.158 billion. On average, deposit values for the 27 commercial banks registered a mean of Kenya Shillings 346.007 billion between 2005 and 2014 with each bank's deposit deviating from the mean by Kenya Shillings 65.825 billion. Inflation rate recorded a mean of 11.11percent with standard deviation of 6.510 percentage point. Interest rate averaged at 9.036% with a standard deviation of 2.69%

4.4.1 Variables Trend

Graphical representation of the borrower's uptake was analysed to investigate its trend during the study period. Graph 1 below indicates that borrower's uptake among the 27 commercial banks has been on the increase from 2005 to 2014.

Figure 1: Trend in Borrowers uptake
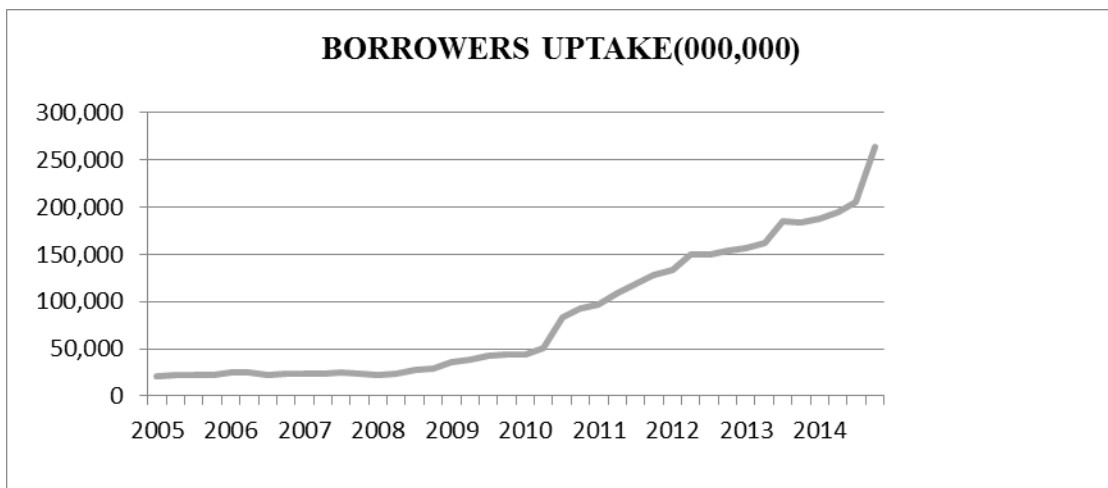
Source; Research Findings

Figure 2 below shows that borrowers uptake increase alongside deposit volume received by the Commercial banks.

Figure 2: Borrowers Credit Uptake Vs Deposit Volume
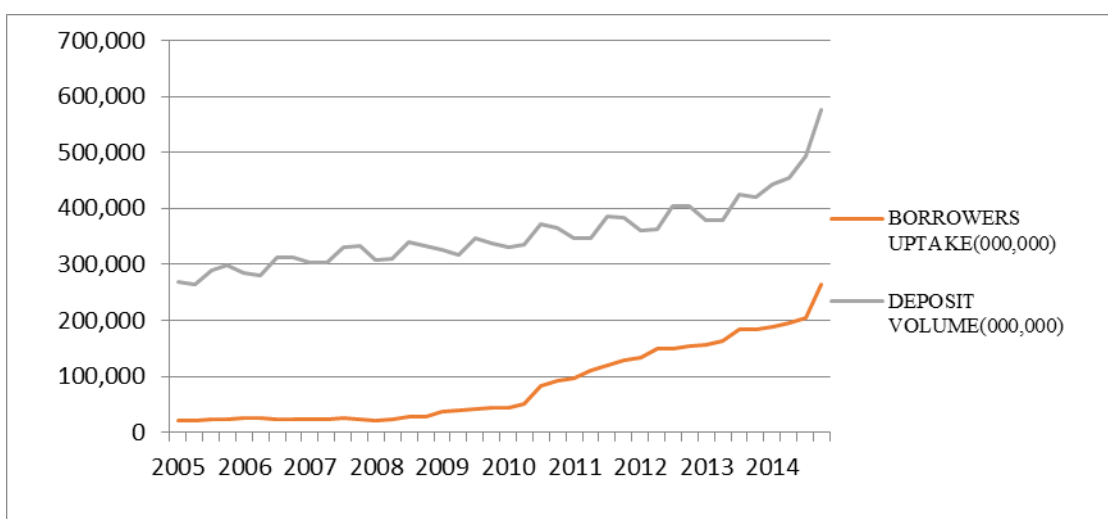
Source: Research Findings

Inflation fluctuates and is characterised by low values and high values in some periods between 2005 and 2014.

Figure 3: Inflation

Source: Research Findings

Interest rate stabilises between 2005 and 2008 and increased sharply from 2011 to 2012 and then eventually declined as shown in figure 4.

Figure 4: Interest rate

4.5 Inferential Statistics

4.5.1 Correlation Analysis

The strength and nature of relationship between the dependent variable (Borrowers uptake) and the independent variables (Inflation, interest rate and deposit volume) was established using correlation analysis and the result is presented in table 3 below.

Table 3: Correlation Analysis

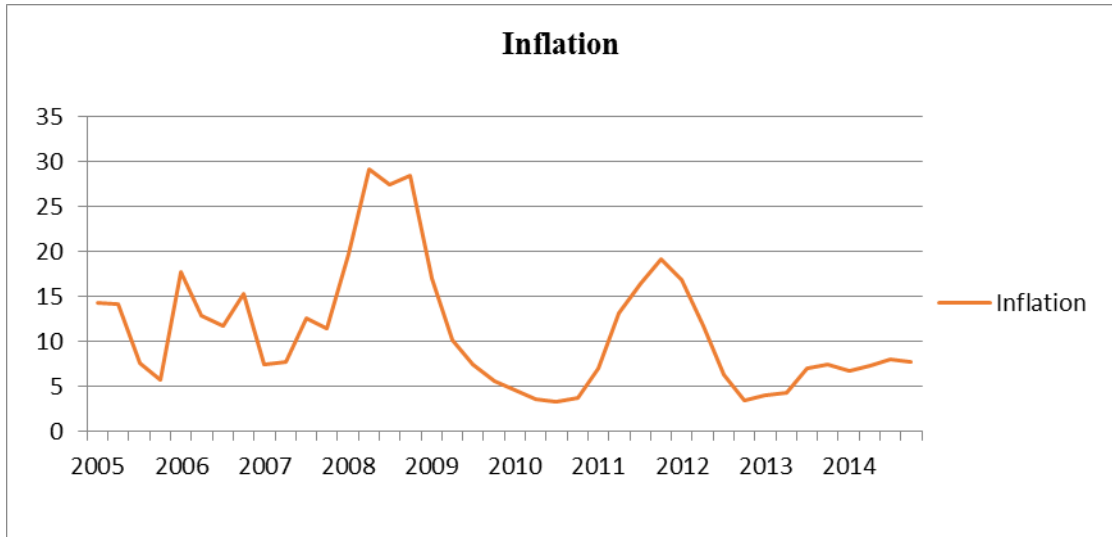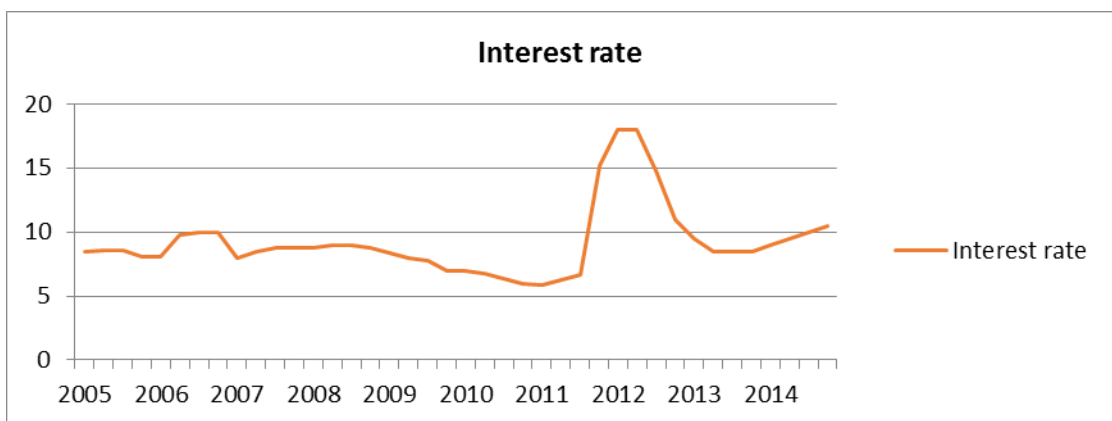|		Borrowers Uptake (000,000)	Deposit Volume (000,000)	Inflation (%)	Interest rate (%)
Borrowers Uptake (000,000)	Pearson Correlation	1.000			
	Sig. (2-tailed)				
	N	27			
Deposit Volume (000,000)	Pearson Correlation	.921**	1.000		.
	Sig. (2-tailed)	.000			
	N	27	274		
Inflation	Pearson Correlation	-.350*	-.272	1.000	
	Sig. (2-tailed)	.020	.074		
	N	27	27	27	
Interest rate	Pearson Correlation	.363*	.262	.188	1.000
	Sig. (2-tailed)	.015	.086	.221	
	N	27	27	27	27

**Correlation is significant at the 0.01 level (2-tailed).
*.Correlation is significant at the 0.05 level (2-tailed).
 Source; Research Findings

The correlation analysis shows that there is positive and strong correlation between borrower's uptake and deposit volume (R=0.921). This illustrates that an increase in deposit volume will be associated with an increase in borrower's uptake. Inflation has a negative association with borrower's uptake while interest rate is positively associated with borrower's uptake

4.5.2 Regression Analysis

A multiple linear regression model was used to estimate the effect borrower's uptake in the study. To normalize the data, natural log of borrower's uptake and natural log of deposit volume was used instead of using the nominal values. Interest rate and inflation are in ratio form therefore there is no need to use their natural log values. Model summary, analysis of Variance and regression results are therefore presented below.

4.5.2.1 Model Summary

From the model summary (Table 4), R-square of 85% implies that 85% of the total variation in borrower's volume is attributed to the changes in the explanatory variables (Inflation, interest rate and deposit volume)

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.922[a]	.850	.839	.3631769

a. Predictors: (Constant), ln Deposit Volume, Inflation, Interest rate

Source; Research Findings

4.5.2.2 Analysis of Variance

The Analysis of Variance (ANOVA) was used to check how well the model fits the data. The results are presented in table 5. The F statistic is the regression mean square (MSR) divided by the residual mean square (MSE). Since the significance value of the F statistics value of 75.752 is statistically significant at 5% level of significance since the P value of 0.000<0.005.Then the predictors explain the variation in the dependent variable (borrower's uptake).

Table 5: Analysis of Variance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	29.974	4	9.991	75.752	.000[b]
	Residual	5.276	23	.132		
	Total	35.250	27			

a. Dependent Variable: ln Borrowers Uptake

b. Predictors:(Constant).Interest rate, ln Deposit Volume, Inflation

Source; Research Findings

4.5.2.3 Model Coefficients

Table 6: Regression result

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-84.251	9.057		-9.303	.000
Inflation	-.025	.009	-.182	-2.757	.009
Interest rate	.054	.022	.160	2.413	.020
ln Deposit Volume	4.095	.342	.808	11.965	.000

a. Dependent Variable: ln Borrowers Uptake

Source; Research Findings

Table 6 shows the regression coefficients of independent variables. The following regression model was established. All the t-statistics are greater than 2 hence by rule of thumb the regression coefficients are all significant. The following regression equation was established.

$Y = -84.251 + 0.160X_1 - 0.182X_2 + 0.808X_3$

4.6 Interpretation of the Findings

The regression result shows that inflation is statistically significant at 5% level of significance as explained by the ANOVA table. Though the effect of inflation on borrowers uptake of credit facilities is negative. One percentage increase in inflation will lead to a decrease in borrower's uptake among commercial banks in Kenya by 18.2 percentage points.

The results also established that Interest rate has a significant and a positive impact on borrower's uptake of credit facilities in Commercial banks. One unit increase in interest rate will lead to 16.0 percent increases in borrowers uptake credit facilities. This result is against the inverse economic relationship between interest rate and loans. However, the positive relationship could be explained by rational expectation of borrowers who anticipate a future decrease in interest rate. More so, we can also conclude that the demand for credit facilities are has not been satisfied by the existing supply of loanable funds. Therefore potential borrowers uptake of credit facilities will not be determined by the price charged by Commercial banks in Kenya. These results agree with the findings of Karlan & Zinman (2008) who concluded that the demand for money is perceived to be price inelastic among the poor. This has encouraged most commercial banks to charge a relatively high interest rate owning to the fact that this will not deter borrowers credit uptake.

Deposit volume is a significant determinant of borrower's uptake and the relationship is positive. The coefficient volume implies that one percent increase in deposit volume will leads to 80.8 percentage point increase in borrower's uptake. Deposits

provided by bank customers are the cheapest source of funds for Commercial banks which significantly affects their liquidity. Therefore, In order for banks to maximize profitability especially when demand for loans is high they need to ensure the deposit volumes are sufficient.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATION

5.1 Introduction

This chapter provides a summary of the study, the findings, conclusions, policy implication and areas of further study.

5.2 Summary of the findings

The objective of this study was to establish the effect of interest rate on borrowers' uptake of credit facilities in Commercial banks in Kenya. The study analyzed a sample of 27 commercial banks in Kenya for the period between 2005 and 2014 based on quarterly data. Descriptive statistics was employed where mean, standard deviation and the maximum and minimum values were calculated. Inferential statistics was also used to test the significance of the variables at 95% level of confidence. The findings established that interest rate had a mean of 9.036% with a standard deviation of 2.699% Inflation recorded of 11.118% with a standard deviation of 6.510% On the average, deposit volume recorded a mean of 346.007 Billion with standard deviation of 65.828Billion.Borrowers uptake of credit facilities value during the study period recorded a mean of 78.800Billion with a standard deviation of 69.158Billion.

The result established a coefficient of determinant of 85% which showed that interest rate and the control variables contribute to the changes in borrowers uptake of credit facilities. Interest rate was established to be statistically significant at 5% level of

significance and though the effect is positive in that 0.160 increase in borrowers uptake of credit facilities in commercial banks. Inflation was found to be statistically significant at 5% level of significance and a unit increase in inflation will result to 0.182 unit decrease in credit uptake. Level of deposit in Commercial bank was established to be statistically significant at 5% level in affecting borrowers uptake of credit facilities. A unit increase in deposit volume will lead to 0.808 increase in borrowers uptake of credit facilities.

All the variables used in the regression were found to be statistically significant in explaining the variation in borrower's uptake of credit facilities in Commercial banks with inflation being negatively associated with borrower's uptake while interest rate and deposit volume both have positive effect on borrower's uptake of credit facilities.

5.3 Conclusion

Examining the effect of interest rate on borrower's uptake in Kenya for the period 2005 to 2014 was the main objective of the study. The findings provide evidence that the explanatory variables (interest rate, inflation and level of deposits) considered, explain borrowers uptake of credit facilities uptake. This is supported by an R-square value of 85.0%. From the study findings, it is evident that interest rate, inflation and level of deposits are statistically significant at 95% confidence level in explaining the variation in borrowers uptake value of credit facilities. The finding indicates that interest rate significantly and positively impacts on the borrower's uptake. Therefore the study concludes that interest is important in determining the level of borrowing in commercial banks in Kenya. However, the regression result goes against the economic expectation of the relationship between interest rate and loan uptake.

It is imperative to note that borrowers uptake of credit facilities in Commercial banks market is not strictly a macro economical variable. Thus it is almost obvious that there are other underlying variables in the study that somehow affect the results.

5.4 Recommendations

From the findings and conclusions, Commercial banks should offer attractive interest rate on deposits to attract more savings. More deposits will provide a large pool of resources from which banks can offer credit facilities to their clients. The government of Kenya should put in place interventions that monitor inflation and maintain it at reasonable levels to enhance borrower's uptake in commercial banks in Kenya.

Borrowers uptake of credit facilities is influenced by inflation, deposits level and interest rates factors that are controlled by Central bank. The Central bank of Kenya should employ monetary policies to ensure sustained money supply in the economy. This will positively influence uptake of credit facilities by borrowers. In periods of high inflation, Commercial banks performance is greatly affected by uptake of credit facilities. The government should therefore come up with mechanisms to cushion Commercial banks from the huge shocks which will stabilise the credit market.

Full disclosures of all charges related to credit facilities should be done by the financial institutions to enable bank customers make informed decisions this also includes disclosure on various components that might affect the effective interest rate year to year. The government and private institutions should also support development of alternative sources of financing such as micro finance institutions and Saccos that offer friendly terms of borrowing as opposed to Commercial banks.

5.5 Limitation of the Study

In carrying out this study, a limitation relating to incomplete record in commercial banks of Kenya was experienced. Commercial banks have a predisposition of failing to make public their true financial position. This puts to test the validity of the data used in the study therefore inference from the result might not convey the true result.

Commercial banks have a tendency of withholding information. They are not willing to give information to third parties and this they attribute to internal policies and regulations that govern their operations. Moreso, the regulator has not made it a condition for banks to submit detailed data about their operations. Hence Commercial Banks submit very minimal information which greatly affected this study.

5.6 Suggestions for Further Study

The findings of this study set a ground for further research. The results indicated that interest rate is positively correlated with borrowers uptake of credit facilities. The study heavily based on the macro economic variables affecting credit uptake. Thus, further studies could be done concentrating on other variables like collateral requirement, loan application fees, insurance requirement and accessibility of financial services impact on credit uptake.

Additionally, effect of interest rate spread on growth of credit uptake could be looked into. This follows the wide interest rate spreads in the market within the Commercial banks. Up until recently, the rate that was given by the Central Bank known as the KBRR in comparison to what is offered by the banks had very big spreads noted. In light with the introduction of the new interest rate capping rule by Central bank at

Central Bank Rate+4% in September 2016 which minimizes the interest spread, It is important to investigate the effect of this new rule on growth of credit uptake

Further, studies on the extent to penetration of formal credit facilities to the informal sector, rural areas and the poor should be looked into. Our economy has a large informal sector which also requires financial services. This sector significantly contributes to the economic development of the country and access of formal credit facilities will play a big role in ensuring that they venture in more income generating activities.

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APPENDICES

Appendix I: List of Commercial Banks in Kenya

1. African Banking Corporation Ltd

2. Bank of India

3. Bank of Africa Kenya Ltd

4. Bank of Baroda (Kenya) Ltd.

5. Barclays bank of Kenya Ltd

6. CFC Stanbic Bank Limited

7. Chase Bank Kenya Ltd*

8. Charterhouse Bank Ltd***

9. Citibank N A Kenya

10. Co-operative Bank of Kenya

11. Commercial Bank of Africa

12. Consolidated Bank

13. Credit Bank Ltd

14. Development Bank of Kenya

15. Diamond Trust Bank

16. Dubai Bank Kenya Ltd**

17. Ecobank Kenya Ltd

18. Equatorial Commercial Bank

19. Equity Bank

20. Family Bank Ltd

21. Fidelity Commercial Bank Ltd

22. Fina Bank

23. First community Bank Ltd

24. Giro Commercial Bank Ltd

25. Guardian Bank Ltd.

26. Gulf African Bank Ltd

27. Habib Bank A.G Zurich

28. Habib Bank Ltd

29. Imperial Bank Ltd*

30. I&M Bank

31. Jamii Bora Bank Ltd

32. K-Rep Bank

33. KCB Bank

34. Middle East Bank (K) Ltd

35. National Bank

36. NIC Bank

37. Oriental Commercial Bank Ltd

38. Paramount Universal Bank Ltd

39. Prime Bank

40. Standard Chartered Bank Kenya

41. Trans-National Bank (K) Ltd

42. UBA Kenya Bank Ltd

43. Victoria commercial Bank Ltd

Non-Banking Financial Institution

1. Housing Finance Company Ltd.

*bank under receivership

**bank under liquidation

***bank under statutory management

Source: CBK supervision report 2015 pg. 68

Appendix II: Research Data

Year	Borrowers Uptake (000,000)	Deposit Volume (000,000)	Inflation	Interest rate	LN Borrowers Uptake	LN Deposit Volume
2005	20,318	267,669	14.3	8.49	23.7347836	26.31301797
	21,840	264,360	14.23	8.61	23.80698991	26.30057843
	22,189	288,332	7.67	8.61	23.82285194	26.38737955
	22,772	297,800	5.77	8.02	23.84879774	26.41968781
2006	25,173	283,670	17.8	8.02	23.94901847	26.37107862
	24,324	280,776	12.97	9.75	23.91472192	26.3608234
	22,837	311,942	11.8	10	23.85163485	26.46608293
	23,052	312,389	15.3	10	23.86100668	26.4675154
2007	23,642	303,780	7.47	8	23.88627496	26.43956849
	24,057	304,167	7.7	8.5	23.90370903	26.44084238
	25,338	331,735	12.57	8.75	23.95557365	26.52760349
	23,385	332,227	11.47	8.75	23.87534943	26.52908516
2008	21,871	307,079	19.7	8.75	23.80842653	26.45037156
	24,234	310,735	29.13	9	23.91103824	26.46220496
	27,385	340,276	27.43	9	24.03324789	26.5530239
	28,450	333,244	28.5	8.75	24.07142306	26.53214186
2009	36,117	326,168	17.03	8.38	24.31003067	26.51067737
	38,922	316,634	10.2	8	24.38482334	26.48101355
	42,286	346,721	7.47	7.75	24.46772766	26.57178712
	44,148	337,132	5.63	7	24.51081871	26.54374003
2010	44,464	330,852	4.58	7	24.51794825	26.52493842
	50,355	335,833	3.68	6.75	24.64237351	26.5398804
	83,572	371,833	3.33	6.38	25.14896913	26.64171126
	92,897	365,122	3.84	6	25.25475421	26.62349701
2011	97,082	346,841	7.05	5.88	25.29882339	26.57213281
	109,241	347,717	13.16	6.25	25.41681983	26.57465604
	118,672	386,710	16.51	6.63	25.49962504	26.68094014
	127,648	383,843	19.19	15.17	25.57254572	26.67349962
2012	134,107	360,395	16.87	18	25.62190291	26.610467
	149,755	363,408	11.78	18	25.73226897	26.61879297
	149,308	404,469	6.38	14.75	25.72927842	26.72584097
	153,811	403,603	3.53	11	25.75899306	26.7236981
2013	156,416	379,153	4.08	9.5	25.77578193	26.66120694
	162,051	379,767	4.37	8.5	25.81117672	26.66282416
	184,606	424,571	6.99	8.5	25.94148987	26.77434445
	183,251	420,754	7.42	8.5	25.93412358	26.76531325
2014	187,629	442,427	6.72	9	25.95773135	26.8155415
	194,316	454,974	7.32	9.5	25.9927494	26.84350508
	205,343	493,334	8.01	10	26.04794706	26.92445237
	264,617	576,441	7.78	10.5	26.30155037	27.08013893

Appendix III: Letter of Introduction

UNIVERSITY OF NAIROBI
SCHOOL OF BUSINESS
MSC. FINANCE PROGRAMME

Telephone: 020-2059162
Telegrams: "Varsity", Nairobi
Telex: 22095 Varsity

P.O. Box 30197
Nairobi, Kenya

Date...17/10/2016......

TO WHOM IT MAY CONCERN

The bearer of this letter...NGUYEN MARGARET NGELE..
Registration No....D61/83110/2015...
is a bona fide student in the Master of Science in Finance (MSc. Finance) degree program in this University.

He/She is required to submit as part of his/her coursework assessment a research project on Finance problems. We would like the student to do their projects on real problems affecting firms in Kenya. Your organization has been identified for the study and we would, therefore appreciate your assistance to enable him/her collect data in your reputable organization.

The results of the report will be used solely for academic purposes and a copy of the same will be availed to the interviewed organization on request.

JANE MUTURI
MSc. FINANCE ADMINISTRATOR
SCHOOL OF BUSINESS