DETERMINANTS OF LENDING BEHAVIOR IN SELECTED COMMERCIAL BANKS IN KENYA

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Abstract

The study determined the effect of volume of deposit and interest rate on total loan advanced by selected commercial banks in Kenya. The study employed a correlation research design and was informed by theory of Money Supply. The population of study constituted all the ten banks listed at the Nairobi Securities Exchange (NSE) as at the year 2012. A census technique was used to constitute a sample size of nine commercial banks. The study focused on a ten-year period analysis (2002-2011) of the comprehensive financial statements of the sample size and adopted an econometric approach to test the degree of correlation between the variables by employing the multiple regression analysis of the Ordinary Least Square (OLS) method. The findings indicated that lending interest rates are negatively related and significantly affect the total loans advanced. Further, volume of deposit in commercial banks has a significant and positive effect on the total loan advanced. Therefore, commercial banks must innovate ways of increasing their profit through fee incomes and commissions since incomes from interest rate tend to decline with increase in the lending interest rate.

Keywords: Total Loans, Lending Interest Rates, Volume of Deposit, Commercial Bank, Banking

INTRODUCTION

Bank loans are one of the most important long-term financing sources in many countries. Commercial banks are the most important savings mobilization and financial resource allocation institutions. Consequently, these roles make them an important phenomenon in economic growth and development. In performing this role, it must be realised that banks have the potential, scope and prospects for mobilizing financial resources and allocating them to productive investments (Olokoyo, 2011). Olokoyo, (2011) further notes that no matter the

sources of the generation of income or the economic policies of the country, commercial banks would be interested in giving out loans and advances to their numerous customers bearing in mind, the three principles guiding their operations which are, profitability, liquidity and solvency. Lending institutions play a major role in economic growth and development through provision of credit to execute economic activities. However, the major concern of any lender while advancing credit is how they will get their money back (Foluso, 1998) and this implies that the engagement between lenders and borrower is accompanied by certain level of risk

A lot has been reviewed in terms of lending activities of various commercial banks. Some opinions deliberated on the factors responsible for banks willingness to extend much credit to some sector of the economy, while some discussed effect of such extension of credits on productivity and output. Most of these earlier studies agreed on the fact that it is logical for banks to have some basic lending principles or consideration to act as a check in their lending activities (Olokoyo, 2011).To appropriately form the lending decision, banks consider many relevant factors that are likely to determine the borrower's ability and willingness to repay. The main factors that they are considered are the risk of the borrower and the bank-borrower relationship. The risk factor could well be most important in that even if the borrower has a good relationship with the bank and the willingness to repay but lack the capacity to repay, the bank will not receive its interest or principal. Therefore, the risk of borrowers, i.e. the ability to meet future payment obligations, should be evaluated carefully as well.

However, one should not expect that banks consider only risk factors when granting loans since banks' lending decisions are also influenced by the past relationship with the borrowers. Past relationship can help banks to obtain more private information leading to a more accurate understanding of the borrower's business and financial situation. For example, as Degryse, Masschelein, & Mitchell, (2004) describe the importance of the bank-firm relationship factor, 'It is through the temporal progression of a relationship that a bank can learn more than other banks about a firm's ability to meet future obligations, either through the monitoring of debt covenants and payment history or through other services offered to the firm by the bank.'

According to Adedoyin and Sobodun (1996) "lending is undoubtedly the heart of banking business. Therefore, its administration requires considerable skill and dexterity on the part of the bank management". According to Yannis and Spiliotis (1998), in the Walrasian General Equilibrium Framework, there is no room for money, that is, money is neutral. Money can appear only as the result of injection of some high powered money by the monetary authorities and/or because some economic units (usually households) intend to modify their portfolios. Money is predominantly seen as an asset, as a stock that can be augmented or reduced

according to those households. It is held by households despite its low or nonexistent yield, because of its usefulness in trade. Neoclassical and Monetary theorists' emphasize this demand approach because it sets money in the usual neoclassical static framework. Within this framework most of previous studies on commercial bank lending behaviour have been based on demand modeling approach. Banks are assumed to behave as utility maximizers. This study, however conceptually at least takes a quite different approach. The Kenyan Monetary institutional framework does fit in the neoclassical world (at least for the period under investigation, 2002-2011). It is rather a departure from a very strictly regulated financial system whereby funds are allocated at administratively set interest rates through a reserve/rebate system of bank credit and lower and upper limits of lending and deposit interest rates being imposed by authorities. Obviously, against this backdrop, demand approach cannot give adequate answers concerning driving forces of the outstanding lending activities. We have to go deeper to find the generating factors of the lending process in the Kenyan economy from the supply side point of view. Although there is a broad body of literature that addresses issues of bank's lending behaviour, it either focuses on the demand side of debt (firms access to credit) or on the cross-country variation of bank lending behavior. Little effort has been devoted to explaining what determines within country variation of the supply side (banks) choices in their lending practices. This study therefore hypothesized that;

Ho_1:   *The volume of deposit in commercial banks does not affect total loan advanced by commercial banks in Kenya.*

 Ho_2:   *Interest rate does not affect total loan advanced by commercial banks in Kenya.*

THEORETICAL FRAMEWORK

According to Branson (2004) in the theory of Money Supply, He further notes that in general banks create deposits on which no interest is paid, in order to make loans on which interest is earned. The deposits are created in the process of making loans; a loan is credited to the borrower's account. Thus the incentive to increase deposits lies in the posibility of making profitable loans. When loan demand by a potential borrowers falls off, banks may not create deposits up to the full limit that reserves would support. Thus, they may from time to time, have on hand excess reserves. On the other hand when loan demand is particularly strong, banks may borrow reserves at the discount window to support the additional deposit creation that accompanies the increase in loans. This degree of freedom that the banks have to hold excess reserves or to borrow reserves makes the money supply responsive, to certain extent, to loan demanded and the interest rate. When loan demand is trong and interest rates are high, the banks will squeeeze excess reserves and increase borrowing at the discount window,

increasing borrowing at the discount widow, increasing the money supply supported by a given amount of unborrowed reserves supplied by Federal Reserve System. Thus the money supply itself will have a positive elasticity with respect to the interest rate, reducing the slope of LM curve. This theory will therefore provide guidance in establishing how interest rate among other factors plays out in determining the supply of credit by the selected banks in Kenya.

LITERATURE REVIEW

Interest Rate

Loan pricing or interest rate is one of the most important terms in the lending decision process. Banks cannot charge loan rates that are too low because the revenue from the interest income will not be enough to cover the cost of deposits, general expenses and the loss of revenue from non-performing loan portfolio. They cannot charge too high loan rates because they will not be able to keep the banking relationship with the borrowers. Moreover, Banks cannot always set high interest rates, e.g. trying to earn maximum interest income.

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 (Stiglitz and Weiss, 2001). 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 the loans, they may develop moral hazard behaviour or so called borrower moral hazard since they are likely to take on highly risky projects or investments (Chodechai, 2004). From the reasoning of Stiglitz and Weiss (2001), 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.

A model of the neoclassical credit market postulates that the terms of credits clear the market. If collateral and other restrictions (covenants) remain constant, the interest rate is the only price mechanism. With an increasing demand for credit and a given customer supply, the interest rate rises, and vice versa. It is thus believed that the higher the failure risks of the borrower, the higher the interest premium (Ewert, Szczesmy, Schenk, 2000). The increase in demand for credit brought about by low interest rates eventually may lead to depreciation of currency. Central bank therefore must adjust the interest rate to increase the cost of borrowing. Commercial banks in their turn must increase their rates and therefore lending is lowered as credit becomes expensive.

Low interest rate lowers the cost of borrowing, which results in higher investment activity and the purchase of consumer durables. The expectation that economic activity will strengthen may also prompt banks to ease lending policy, which in turn enables businesses and households to boost spending. In a low interest-rate environment, shares become a more

attractive buy, raising households' financial assets. This may also contribute to higher consumer spending, and makes companies' investment projects more attractive. Lower interest rates also tend to cause currencies to depreciate. Therefore, the central bank has to counter the depreciation by adjustingthe Central Bank Rate (CBR) up to make the cost of borrowing high and thus make the loans unattractive (Crowley, 2007). Still, a major concern for the empirical analysis is the fact that banks respond quite heterogeneously to monetary policy changes and this may also have implications for their risk-taking and profitability, as in the case of lending. The heterogeneous behavior of banks originates from their different balance sheet characteristics. Theory on the bank lending channel identifies incentive mechanisms that work through the capital structure of banks, their liquidity levels and/or their size and argues that these mechanisms may play an important role in altering bank lending when there is a change in policy interest rates (Diamond and Rajan, 2006; Bolton and Freixas, 2006).

According to International Journal of Economics and Management Sciences (Vol. 1, No. 9, 2012), Interest rate is the rate of return on investment and the cost of borrowing funds. It is determined by the supply and demand for money. Long-term interest rates are paid to a borrower of flawless solvency for a loan of indefinite duration. In Kenya, these are reflected by interest rates for long-term bonds. Short-term interest rates on the other hand are indicated by the treasury bills. The short-term rates are averaged lower than long-term rates but have higher fluctuations.

Crowley (1969), also describes interest rates as a price for the use of funds and if rapid monetary expansion contributes to excessive demand and inflation, it also contributes to rising interest rates. Central Bank's role under the interest rate instrument is to set a short-term official rate of interest, which indicates the price at which it will make liquidity available to the banking system as a lender of last resort. In Kenya, this rate is called the Central Bank Rate. This rate is reflected in the CBK overdraft rates

CBK regulates interest rates charged by banks through interest rate ceiling (81.5%). The banks' interest rates policies are enforced by board of directors, managing directors and credit risk management committees who formulate interest rate policies. The interest rate policies and regulations are relevant in mitigating interest rates, moral hazards and loan defaults.On the cost of loans, different types of loans affect their cost differently, therefore, the type of interest rates adopted by banks influences the non-performing assets. For instance, fixed interest rate contribute more to None Performing Assets (NPA) since the cost interval is high making the borrower pay more at the end of the loan period than he/she should have under floating interest rates as fixed interest rates are loaded upfront (52%). Floating interest rates interrupts borrowers' budget are interrupted hence they are unable to repay loans as planned given the

unanticipated interest in business growth, vary throughout the year, interest doubles in case of default (37%). In cognizance of this, the findings showed that majority of the commercial banks adopt both fixed and floating interest management, therefore, directly influences the level of asset nonperformance in commercial banks.

The benchmark interest rate in Kenya was last recorded at 8.50 percent. Interest Rate in Kenya averaged 14.67 Percent from 1991 until 2014, reaching an all time high of 84.67 Percent in July of 1993 and a record low of 0.83 Percent in September of 2003, interest rates decisions are taken by The Monetary Policy Committee (MPC) of the Central Bank of Kenya. The official interest rate since August 2005 is the Central Bank Rate (CBR), which replaced the 91-day Treasury Bill (TB) rate (CBK, 2014).

Volume of Deposit

Bank deposits refer to money placed into a banking institution for safekeeping. Bank deposits are made to deposit accounts at a banking institution, such as savings accounts, current accounts and money market accounts. The account holder has the right to withdraw any deposited funds, as set forth in the terms and conditions of the account. The "deposit" itself is a liability owed by the bank to the depositor (the person or entity that made the deposit), and refers to this liability rather than to the actual funds that are deposited.

According to Diamond and Dybvig (2008), acceptance of demand and fixed deposits is the most important bank services associated with the liability side of a bank balance sheet. Traditionally, macroeconomists have focused on liability services because of the linkage between demand deposits and the money supply. Money market funds, brokers' asset management accounts, and credit cards have competed more or less directly with the banks in the market for provision of secure and liquid stores of funds and in the market for clearing transactions. These changes in the payments technology have weakened the link between the money supply and bank deposits. This fact has two types of implications for macroeconomics. One is that banks need not be so important to macroeconomics as they were before since close substitutes exist in the provision of payment and other liability services. The other (antithetical) implication is a potential policy goal of trying to repair the money supply linkage by tightening bank regulation and keeping nonbanks out of the liability service businesses. The important observation is that, even if banks were no longer needed for liability services and if they were constrained from performing their role in controlling the money supply, then important policy questions concerning banks would still arise since banks provide other important services. In other words, the banking system is an important part of the infrastructure in any economy.

Ongore and Kusa (2013), explain that through their intermediation function in accepting deposits, banks play a vital role in the efficient allocation of resources of countries by mobilizing resources for productive activities. They transfer funds from those who don't have productive use of it to those with productive venture. In addition to resource allocation good bank performance rewards the shareholders with sufficient return for their investment. When there is return there shall be an investment which, in turn, brings about economic growth. On the other hand, poor banking performance has a negative repercussion on the economic growth and development. Poor performance can lead to runs, failures and crises. Banking crisis could entail financial crisis which in turn brings the economic meltdown as happened in USA in 2007 (Marshall, 2009.) That is why governments regulate the banking sector through their central banks to foster a sound and healthy banking system which avoid banking crisis and protect the depositors and the economy (Heffernan, 1996)

The Deposit Protection Fund Board (DPFB) was established in 1985 following a banking crisis in Kenya. It was established through anamendment to the Banking Act which provided for the setting up of the Deposit Protection Fund to provide deposit insurance to depositors of DPFB member institutions and consequently restore confidence andstability in the banking sector. The Act further states that the Central Bankof Kenya would appoint DPFB as liquidator of insolvent commercial banksand non bank financial institutions (DPFB, 2009).

Financial institutions have been in the process of significant transformation. The force behind the transformation of these institutions is innovation in information technology. Information and communication technology is at the Centre of this global change curve of mobile and internet banking in Kenya. Rapid development of information technology has made banking tasks more efficient and cheaper (Okiro and Ndungu, 2013).

Mobile Money Transfer Service *M-PESA* offered by *Safaricom* Limited has opened the eyes of the world to the potential of mobile money and mobile payments, creating what would easily pass as a financial services revolution and competition to the banks in terms of deposit accumulation and money transfer services (Okiro and Ndungu, 2013). *M-PESA* deposits funds are however deposited in several commercial banks, which are prudentially regulated in Kenya. In addition, the funds are held by a Trust and are therefore out of reach from *Safaricom*, which cannot access or use them. In the unfortunate event of *Safaricom* going bankrupt, the creditors of *Safaricom* would not have access to the *M-PESA* funds. This is a requirement from the Central Bank of Kenya which oversees *M-PESA*. The funds remain at all times the property of *M-PESA* users. The accumulated balance of all the *M-PESA* accounts represents just 0.2% of bank deposits by value. *M-PESA* is far from exerting a systemic risk. In June 2010, *M-PESA* transactions amounted to about 70% of the volume of electronic transactions in the country but

were only 2.3% in value. *M-PESA's* success means there is a real need for small electronic transactions and storage of value. It was designed with limits on how much can be transacted (no more than 70,000Ksh leaving the account daily) and stored (maximum account balance is 50,000Ksh). Cash-in, cash-out and P2P transfers are limited to Ksh 35,000 per transaction (Okiro and Ndungu, 2013).

Olokoyo (2011) found out in his study on Nigerian banking behaviour that volume of deposit has the highest impact and influence on the lending behaviour of commercial banks and a change in it will yield the highest change in banks' loans and advances. Therefore banks should strive hard to manage their deposits efficiently so that their objective of profitability can be achieved and the multiplier effects maintained to the maximum. This implies that generation of more deposits is tangent to the survival of Nigerian banks as a whole. Caprio and Demirguc-Kunt (1998) by using a sample of Russian banks, found that the median banks assign only 0.5 percent of its total assets in terms of long-term loans to business and there is large cross-sectional disparity in this ratio among banks. They argued that the bank's capacity to expand long-term business loans depends on various factors including its capitalization, size and the availability of long-term liabilities. However, the ownership of banks did not matter. They also concluded that the banks hesitated to issue business loans with more than three years maturity. Their results exhibit that the banks with lower level of capital have lower funding for long term loans and banks in most competitive areas are reluctant to supply long term loans

This conceptual framework illustrates the linkage between the various study variables considered in the study. It is modeled based on the theory of money supply. Branson (2004) demontrates that the amount of money supply in the economy is greately determined by reserve ratio requirements, excess reserves (volume of deposits) and interest rates. These determinats put together would determine the availability of loanable funds.

Figure 1: Conceptual Framework
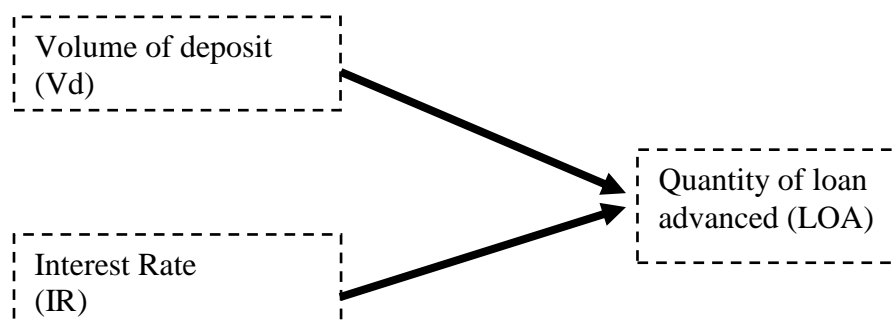
Source: Branson, 2004

RESEARCH METHOD

This research employed a correlation research design. The population of study constituted all the 10 banks that were listed in at the Nairobi Securities Exchange (NSE) as at the year 2012. The study focused on a ten-year period of analysis (2002-2011) of the comprehensive financial statements of all commercial banks listed by 2006. Co-operative Bank of Kenya was therefore excluded as it was listed in the NSE market in the year 2008.

The Data

A census technique was therefore used to constitute the sample size of 9 commercial banks in this study with Co-operative Bank being an exception. A data collection form was used to collect data through document analysis. The data was obtained from the individual banks' comprehensive income statement and statement of financial position. The source of these financial statements was the Nairobi Securities Exchange where the information is availed to the public at a fee and respective banks websites and annual reports. The study used both descriptive and inferential statistics in the analysis. Trend analysis was established to determine the behavior of the variables over the ten year time period. The means of the variables were generated and correlations established using t-test at 95% confidence interval. The study then adopted an econometric approach to test the degree of correlation between the variables by employing the multiple regression analysis of the Ordinary Least Squares (OLS) method with SPSS 17.0 package.

The Model of Data Analysis

The main objective of this study was an investigation of the relationship that exists between the loan and advances of commercial banks and each of the other explanatory variables that have been identified through literature and theory i.e. volume of deposits, interest rate, and liquidity ratio. There are other factors not explicitly included in the model that are policy instruments for regulation of banks operation like government control and monetary authorities' guidelines and past relationship with customers. These are captured by the error term in the model. The model adopted assumes an underlying relationship between the variables expressed in a functional form and banks' loans and advances. The belief was informed by Usman (1999) that banks lending should vary from time to time with the variables expressed.

The model is specified implicitly below:

$$LOA = f(Vd, Ir, \mu) \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots eq\ (3.1)$$

The explicit form of equation (3.1) above is represented as follows:

$$LOA = \alpha_0 + \alpha_1 Vd + \alpha_2 Ir + \mu \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots eq.\ (3.2)$$

Where: LOA: Loans and Advances

Vd: Volume of Deposits

Ir: Average Interest Rate

μ: Stochastic term (contains other variables not explicitly included in the model)

α_0: intercept of the regression line

α_1, α_2, α_3, > 0: Regression coefficients to be estimated

The model specified above, was used to empirically achieve the objective of the study. Coefficient of determination (R^2) was used to test goodness of fit/explanatory power of the model.

Diagnostic Tests

The study tested the normality of the regression model to determine whether the assumption of normality of distribution was attained. The Kolmogorov-Smirnov statistic was not significant ($p>0.05$) and therefore the distribution is normal. In addition, Shapiro-Wilk was not significant ($p>0.05$) indicating that the distribution of the data was normal.

The regression results showed that the multiple regression model had a coefficient of determination (R2) of about 0.624. Durbin–Watson statistic which came to 1.168 is substantially less than 2 and insignificantly more than 1 indicating minimal serial correlation. Although positive serial correlation does not affect the consistency of the estimated regression coefficients, it does affect our ability to conduct valid statistical tests.

As such, the study concluded that the significant statistics were valid. The values of tolerance were greater than 0.2 rule and those of Variance Inflation Factors (VHF) were less than 4. This shows lack of multicollinearity among independent variables. Therefore, omitting variables with insignificant regression coefficients would be inappropriate.

Breusch-Pagan / Cook-Weisberg test for heteroscedasticity had a Chi square of 0.15 with a P value of 0.6978 implying the rejection of the alternative hypothesis of heteroscedasticity. This means that variance of the error term is constant. The LM test for Autoregressive Conditional Heteroscedasticity (ARCH) reported a Chi Square of 0.512 with a P value of 0.4743 implying the acceptance of the null hypothesis of no Auto-Regressive Conditional Heteroscedasticity. Breusch-Godfrey LM test for autocorrelation reports a Chi Square of 9.565 with a P value of 0.0084 implying the acceptance of the null hypothesis of the first order serial autocorrelation. Since the first order serial autocorrelation is present in the data, we use the robust standard errors which account for the presence of autocorrelation. Thus, the normality of the distribution is ensured in the study.

Unit root test for all the variables using the Augmented Dickey Fuller (ADF) test showed that Liquidity Ratio, Volume of Deposit and Average Interest Rate are stationary in levels since at first differencing, the calculated ADF and PP tests statistics clearly reject the null hypothesis of unit root both at the 1 per cent and 5 per cent significance levels when compared with their corresponding critical values. Clearly, the ADF and PP test decisively confirm stationarity of each variable at first differencing under both constant and constant plus trend level, and depict the same order of integration.

ANALYSIS AND DISCUSSION OF FINDINGS

### Descriptive Statistical Analysis for all the years

Results in table 1 indicated that banks' had average quantity of loan at Ksh 42,482.23. Further, analysis showed that the mean volume of deposits was Ksh 56,592. Additionally, mean interest rate was recorded at 18.5%. The standard deviations are less than the means reflecting a small coefficient of variation. The range of variation between maximum and minimum is also reasonable.

Table 1. Descriptive statistics of the variables for all the years (2002-2011)

| Variable	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Quantity of Loan	90	2696	198725	42482.23	36835.05	1.486	2.882
Volume of Deposit	90	4581	259309	56592.1	46684.15	1.469	3.359
Average Interest Rate	90	6.54	18.5	13.8322	2.60439	-0.693	1.225

Figure 2 below shows that volume of deposit and quantity of loan exhibited an upward trend from the base year 2002 to 2011. The trend could be attributed to banks channeling credits on behalf of the depositors while assessing the risks at hand.

Figure 2: LOA & Vd trend throughout the years
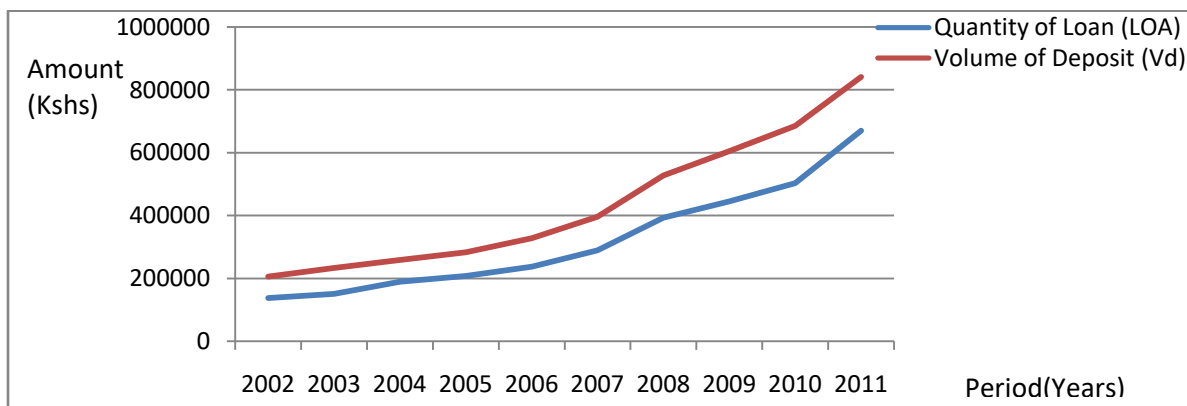
However, average interest rate exhibited a more rigid trend as compared to quantity of loan and volume of deposit as shown in figure 2 below.

Figure 3: Ir trend throughout the years
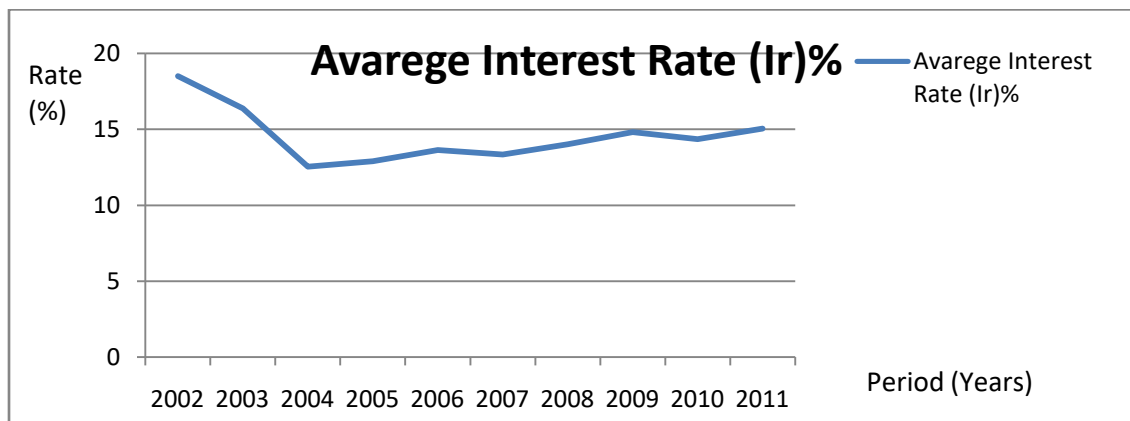
Correlation Statistics

Pearson Correlations results in table 2 showed that volume of deposit was most highly positively and significantly correlated to quantity of loan (r=0.585, ρ<0.05). Thus volume of deposit had 58.5% positive relationship with quantity of loan. Similarly, average interest rate was also weakly associated with quantity of loan (r = -0. 217, ρ<0.05) an indication that interest rate had 21.7% significant negative relationship with quantity of loan. Findings provided enough evidence to suggest that there was linear relationship between volume of deposit, average interest rate with quantity of loan.

Table 2. Correlation Statistics

Variables	Quantity of Loan	Volume of Deposit	Average Interest Rate
Quantity of Loan	1		
Volume of Deposit	.585**	1	
Average Interest Rate	-.217*	0.08	1

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

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

Hypothesis Testing (Regression Results)

Table 3 illustrates the model summary of multiple regression models. The results showed that the two predictors (volume of deposit and average interest rate) explained 49.1 percent variation of quantity of loan. This showed that considering the two independent variables, there is a

probability of predicting quantity of loan by 49.1% (R squared =0.491). From the Analysis of Variance (ANOVA) model table 2, F ratio of 27.639 with p value 0.000 <0.05 (level of significance) indicated that the coefficient of determination R^2 was significant. Thus, the model was fit to predict quantity of loan using volume of deposit and average interest rate.

From the study findings, it is evident that Interest Rate, the rate, at which a commercial bank lends money to the borrowers, had linear relationship with quantity of loan. From correlational statistics, average interest rate was negatively associated with quantity of loan (r = -0.217, ρ<0.05). This indicated that interest rate had 21.7% negative relationship with quantity of loan. Therefore, lending interest rate affects total loan advanced by commercial banks in Kenya. The findings were therefore in concurrence with Usman, (1999) statement that "a major regulation affecting commercial banks lending in Nigeria is the restriction on the amount of interest they are allowed to pay on deposits in an effort to attract additional depositors and the interest they charge on their fund based activities".

Volume of deposit in commercial banks has a significant effect on the total loan advanced by commercial banks. Pearson Correlations results in table 2 showed that volume of deposit was most highly positively and significantly correlated to quantity of loan (r=0.585, ρ<0.05). Thus volume of deposit had 58.5% positive relationship with quantity of loan. The research findings are therefore in agreement with Olokoyo, (2011) in Nigerian banking behaviour. He asserted that, the volume of deposit has the highest impact and influence on the lending behaviour of commercial banks and a change in it will yield the highest change in banks' loans and advances.

Table 3. regression results

Variables	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	24590.12	8770.226		2.804	0.006
Volume of Deposit	0.384	0.047	0.635	8.189	0.000
Average Interest Rate	-1540.67	519.917	-0.23	-2.963	0.004
F	27.639				
Sig.	0.00				
R Square	0.491				
Adjusted R Square	0.473				

a Dependent Variable: Quantity of Loan

CONCLUSION AND RECOMMENDATIONS

The study findings revealed that the banks' interest rates have an inverse relationship with total loans advanced by commercial banks such that high interest rates discourage borrowing and vice versa. Further there was also an evidence of a very strong negative relationship between Average Interest Rate and quantity of loan advanced by commercial banks. This means that as the lending rate increases, the Commercial Bank lending to the private sector decreases.

Based on the findings of the study it was evidenced that Interest Rate has an immense effect on the total advanced loans by commercial banks. Thus, commercial banks must find other innovative ways of expanding their loan book in order to maximize on interest income. This can be achieved by differentiating loan products vide offering attractive packages within appropriate risk management framework. Commercial banks should also try as much as possible to strike a balance in their loan pricing decisions. This will help them to be able to cover cost associated with lending and at the same time, maintain good banking relationship with their borrowers.

There should also be closer consultation and cooperation between commercial banks and the regulatory authorities so that the effect of regulatory measure on commercial banks is taken into account at the stage of policy formulation. Commercial banks could also increase profit by booking a larger volume of loans than they have done previously in order to make up for the short fall of the interest income. Since loans have to be met in cash in many cases, commercial banks, therefore, have to stock reasonable quantity of cash to meet customers' demands.

Study findings revealed that the volume of deposit in commercial banks has an effect on loans advanced by them. Therefore banks should strive hard to manage their deposits efficiently so that their objective of profitability can be achieved and the multiplier effects maintained to the maximum.

This study established the determinants of lending behavior in selected commercial banks in Kenya. This study recommends that another study should be done to augment the findings in this study; it therefore recommends a study be done on the effect of monetary policies on borrowing behavior of the commercial banks.

LIMITATIONS OF THE STUDY

The data source for the study was CBK and respective bank websites and the NSE data base. Those banks that were not listed at the NSE at inception did not have the relevant data for the study; this limited the choice of sample size for the period under focus. Analysis of documents were on the annual report and financial statements which have drawn a lot of criticism because

different banks may interpret differently the accounting principles and standards. This compromises the generalization of the data. Since Kenya uses interest rate policy as a tool of controlling inflation and which is generally volatile, the expected determinants of bank lending behavior may not be generalized to other economies that use different monetary instruments.

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