

Financial Factors Affecting Lending Portfolio of Commercial Banks in Kenya (A Case of Commercial Banks in Mombasa County)

Georgine Jakait and Nagib Omar

Jomo Kenyatta University of Agriculture and Technology P.O BOX 81310-80100 Mombasa.

ARTICLE INFO

Article history:

Received: 15 August 2017;

Received in revised form:

14 September 2017;

Accepted: 23 September 2017;

Keywords

Central Bank Rate,
Country Risk,
Collateral,
Credit Risk,
Economic Growth,
Interest Rate,
Information Asymmetry,
Corporate Lending Products.

ABSTRACT

The study aimed to examine financial factors affecting lending portfolio in commercial banks in Kenya. The specific objectives of this study were: to determine the effects of interest rates on the lending portfolio of commercial banks in Kenya; to establish the effect of deposit mobilization on the lending portfolio of commercial banks in Kenya; to assess the effect of collateral on the lending portfolio of commercial banks in Kenya; and finally determine the effect of loan repayment on the lending portfolio of commercial banks in Kenya. The study was based on Liquidity Preference Theory (LPT), Loanable Funds Theory and The Theory of Interest. The study used a cross sectional survey research design administered through questionnaires. The heads of credit related departments who are concerned with policies implementation in 43 commercial banks in Kenya formed the target population. The sample population of the study was 64 respondents. The mean, standard deviation, correlation and regression were the main statistical analysis used. It was found that interest rate had a negative correlation with lending portfolio. Deposit mobilization, which is the source of funds for the banks, had a positive effect on the lending portfolio. Emphasis on collateral requirements had a negative effect on amount of loans but increased the quality of the loans lent out (low risk of default). Finally it was found that loan repayment policies had a positive significant effect on the lending portfolio. It was concluded that unfavourable (high) interest rate reduces lending portfolio. Effective deposit mobilization strategies increases lending portfolio. Loan repayment policies increase the lending portfolio. Finally, collateral requirement increased the chance of loan repayment thus increasing the quality of lending portfolio. Consequently it was recommended that the stakeholders, especially the government to implement economic strategies that spurs economic growth. The economic growth as multiplier effect in that it does not only empowers the citizens financially, it also reduces the interest rate of bank loans. There should be effective assessment mechanisms of potential borrowers so as to have appropriate collateral requirement for an individual borrower. Finally it was recommended that a complementary study that examines the causes of non-repayment in commercial banks will be ideal. This study also proposed another study be carried out that investigates the direct role of lending portfolio on bank's financial performance.

© 2017 Elixir All rights reserved.

Introduction

The banking sector is an indispensable financial service sector supporting development plans through channelizing funds for fruitful purpose, mobilizing and controlling flow of funds from surplus to deficit units and supporting financial and economic policies of government. The success of banking is assessed based on profit and quality of assets it possesses. Even though bank serves social objective through its priority sector lending, mass branch networks and employment of many people, maintaining quality asset book and continuous profit making is important for banks continuous growth. Bank loans are one of the most important long-term financing sources in many countries (Freixas&Rochet, 2008). In some developed countries like Japan, long term bank loans represent more than 70% of its total long-term debt.

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 (Fleisig, 2009), and this implies that the engagement between lenders and borrower is accompanied by certain level of risk. The major types of risks faced by lending institutions globally include market risk, operational risk, and performance and credit risks. The level of each type of risk largely depends on the environment that the lending institution is conducting its operation. Credit risk is defined as the change in the value of the asset portfolio of a bank, due to the failure of an obligor to meet his payment commitments (CBK, 2015).

Loan portfolios are the major assets of banks, thrifts and other lending institutions. The value of a loan portfolio depends not only on the interest rates earned on the loans, but

also on the quality or likelihood that interest and principal will be repaid. One of the principal activities of commercial banks is to grant loans to borrowers. Loans are among the highest yielding assets a bank can add to its balance sheet, and they provide the largest portion of operating revenue. In this respect, the banks are faced with liquidity risk since loans are advanced from funds deposited by customers (Parlour & Winton, 2011). Hamisu, (2011) notes that credit creation involves huge risks to both the lender and the borrower. The risk of the counterparty not fulfilling his or her obligation as per the contract on due date or anytime can greatly jeopardize the smooth functioning of bank's business. On the other hand, a bank with high credit risk has high bankruptcy risk that puts depositors' funds in jeopardy.

Global financial systems or markets have witnessed an impressive expansion in the past decades. Accompanying this expansion is a big evolution in the business practice. The financial sector, in a broad sense, has developed an array of new financial instruments and techniques to adopt the ever-changing global environment. Through their different abilities to promote innovative products, different national financial systems have exerted varying degrees of impact on economic performances. As a result, the rising importance of the financial sector in modern economies and the rapid rate of change experienced have spurred research interest in financial institutions especially in banking (Ho, 2012). Central bank lending is widely regarded as a vital part of the public safety net supporting the stability of the banking system and financial markets more generally. A central bank that is financially independent and has a sizable portfolio of securities can provide large amounts of liquidity to institutions on very short notice. Indeed, central bank lending has been a prominent part of regulatory assistance to troubled financial institutions for a long past (Mwega, 2010).

Interest rate spread is the interest rate charged by banks on loans to private sector customers minus the interest rate paid by commercial or similar banks for demand, time, or savings deposits. Ideally, it is measured as the difference between the average interest rate earned on loans and the average interest rate paid on deposits for individual banks (Sologoub, 2006). The terms and conditions attached to these rates differ by country, however, limiting their comparability. The amount by which the interest earned by an investment exceeds or fails to exceed its own interest liability, if a bank pays depositor's one interest rate, and lends the deposited money out at higher interest rate, the difference between those two interest rates is the interest rate spread. Interest rate spread is similar to net interest margin, but is difference in that net interest rate spread is hypothetical number that a company could earn if all assets were borrowed and invested (Drake, Deborah & Elisabeth, 2012).

In European countries, Dayydenko and Franks (2014) observe that 75.7% of firm loans in France and 88.5% in Germany are secured whereas Gonas et al (2004) point out that 73% of loans are secured for US firm loans, which is similar to the order of magnitude provided by Berger and Udell (2010). In the wake of the recent financial crisis, it has become increasingly clear that significant declines in the value of widely pledged assets can amplify the business cycle through procyclical changes in credit availability (Gan, 2007). U.S housing prices began falling in the latter half of the 2000s, mortgage defaults rose substantially and the value of mortgage related collateral plummeted. As a result, households' ability to borrow against their homes and

financial institutions' ability to pledge or sell mortgage backed securities became impaired and a global financial crisis ensued.

There are approximately 9 million SMEs in Kenya, accounting for about 45% of the Gross Domestic Product and 90% of newly created jobs (NESC, 2013). However, the potential for the sector have been greatly hampered by lack of credit to finance its operation. According to NESC (2013), 75% of the SMEs rely on cash sales to boost their working capital due to the difficulty they face in getting loans from the banks. NESC (2013) further cited lack of quality information, family management and inability to standardize scoring models as the biggest SME-specific hindrance and obstacle to SME lending in Kenya. Since commercial banks views SMEs as high risk borrowers, they demand excessive collateral or charge high interest or avoid dealing with SMEs altogether (Kundid & Ercegovac, 2011).

The Central Bank of Kenya (CBK), like most other central banks around the world, is entrusted with the responsibility of formulating and implementing monetary policy directed at achieving and maintaining low inflation as one of its two principal objectives; the other being to maintain a sound market-based financial system. Since its establishment in 1966, the CBK has essentially used a monetary-targeting framework to pursue the inflation objective. The use of this monetary policy strategy has been and continues to be based on the presumption that money matters, that the behavior of monetary aggregates has a major bearing on the performance of the economy, particularly on inflation and general economic growth. Econometric studies done to investigate the link between economic growth and monetary expansion have established and lent credence to the strong link between them in Kenya (Durevall and Ndungu, 2009).

Profile of Commercial Banks in Kenya

The Banking sector in Kenya is regulated by the Banking Act, the Central Bank of Kenya Act, the Companies Act and the different prudential rules issued by the Central Bank of Kenya (CBK). Commercial banks are foundations which offer loans and credits, accept deposits and offer related administrations Keitany, (2000). These foundations are race to make benefits. They are authorized and managed by the national banks of purview (nations) in which they work in. In Kenya, the CBK licenses, directs and manages commercial banks as commanded under the Banking Act.

In most recent couple of years, the banking industry in Kenya has kept on developing in resources, stores, benefit and items offering Mawanda, (2012). The development has been as a consequence of industry wide branch system extension technique both in Kenya and in the East Africa and mechanization of countless and a move towards accentuation on the unpredictable client needs instead of customary off-the-rack saving money items. This has prompted an expanded requirement for internal review in banks to improve resource administration, control of dangers and management controls. Players in this part have encountered expanded rivalry in the course of recent couple of years coming about because of expanded developments among the contestants and new participants into the banking sector.

The lending operations of commercial banking in any economy constitute a critical sector in the growth and development of any economy.. (Nwankwo ,2010) The obstacle to access finance exist when there is a need for finances from a client with an investment project that

warrantees financing, but there is impeded access to external financing. This occurs due to the gaps that exist between the suppliers of external financing and the demand for financial resources. This financing gap which is the difference between the demand for funds by SMEs and the supply of funds occurs because of SMEs characteristics and market failure on the supply side (Park, Alhotra, Chen, Criscuolo&Qimiao, 2008). Specifically, Deakins, Barry, Carron and Elisabeth (2008) advanced four reasons that constrain access to small enterprises which include: lack of collateral, poor lending relationship and the subsequent credit restriction.

A higher interest rate will attract risky borrowers and drive out good borrowers because risky borrowers are willing to borrow at higher interest rates, because they know that their repayment probability is low. If riskier projects are associated with higher returns, a rise in the interest rate will drive out low-risk projects as borrowers try to compensate for the higher cost of the loan by earning a higher return with a risky project. An optimal interest rate may therefore exist, beyond which additional loans are not made available despite excess demand. Consequently, a backward bending credit supply curve and equilibrium credit rationing will exist because raising the interest rate above the optimal level would lower banks' profits as the amount of risky projects in their portfolio rises (Babalola, 2012).

Many businesses are also constrained to access finances due to lack of collateral. Due to information imperfections and costly control mechanisms, banks use collateral as the criteria for loan selection (Green, 2001). Due to the existence of asymmetric information, banks base their lending decisions on the amount of collateral available. In the case of default, collateral serves to put the lender into a privileged position with regard to other creditors (Green, 2013).

Several research studies have been done in relation to commercial banks in Kenya Aduda (2011) studied the relationship between credit risk management and profitability among the commercial banks in Kenya; Oludhe (2011) studied the effect of credit risk management on financial performance of commercial banks in Kenya; Gitonga (2010) studied the relationship between interest rate risk management and profitability of commercial banks in Kenya; Ngumi (2013) did a study on the effect of the lending rate on the financial performance deposit taking micro finance institutions in Kenya. A knowledge gap therefore exists and hence this study seeks to address this gap by investigating factors affecting lending portfolio in commercial banks in Kenya.

Objectives of the Study

The specific objectives of this paper are:

1. To determine the effects of interest rates on the lending portfolio of commercial banks in Kenya.
2. To establish the effect of deposit mobilization on the lending portfolio of commercial banks in Kenya.
3. To assess the effect of collateral on the lending portfolio of commercial banks in Kenya.
4. To determine the effect of loan repayment on the lending portfolio of commercial banks in Kenya.

Related Literature

Theoretical Review

This section sheds light on the theoretical framework supported by different authors' views on lending interest rates and the various theories of lending interest rates.

Liquidity Preference Theory

The liquidity preference approach views interest rates from the supply and demand of the stock of money in the financial system. The concept was first developed by Keynes (1936) where he stated that the demand for money is expressed as a function of level of income and interest rate. $MD = (Y, r)$ where: MD = money demanded; Y = Level of income; r = interest rate. This framework holds that the interest rate is determined by the interaction of supply and demand of money stock. According to Keynes (1936) money is demanded mainly for the following motives; transaction, precautionary and speculative motive. He further stated that investors will always prefer short term securities to long term securities. To encourage them hold long term bonds, long term securities should yield higher interests than short term bonds. Therefore, the yield curve will always be upward sloping. It is based on the observation that, all else being equal, people prefer to hold on to cash (liquidity) and that they will demand a premium for investing in non-liquid assets such as bonds, stocks, and real estate. The theory suggests that the premium demanded for parting with cash increases as the term for getting the cash back increases (Norton, 2006).

Auerbach (2007) postulates that the rate in the increase of this premium, however, slows down with the increase in the period for getting the cash back. In financial terms, this theory is expressed as "forward rates should exceed the future spot rates". According to Reilly and Norton (2006), the theory of liquidity preference holds that long term securities should provide higher returns than short term obligations because investors are willing to sacrifice some yields to invest in short maturity obligations to avoid the higher price volatility of long maturity bonds.

According to Howels and Bain (2007), an increased preference for liquidity in the model is equivalent to increased demand for money and therefore demand for money increases wherever more people think interest rates are likely to rise than believes they are likely to fall. The study seeks to identify the rationale of the liquidity preference theory on the relationship between the money supply in form of loans by MFIs in times of rising and or falling lending rate, and the financial performance of the lender. On the other hand the borrowers will only invest where the returns on their investment profile exceed the borrowing rates.

Loanable Funds Theory

Loanable funds theory assumes that interest rates are determined by supply of loan able funds and demand for credit (Fry, 2005). In loan able funds theory the demand for loan able funds originates from domestic business, consumers, governments and foreign borrowers. If the banks are in a hurry to lend money without establishing the credit worthiness of individuals, then the default rate increases and hence business risks which make banks to charge a higher premium to compensate for the default risk. Supply is generated by domestic savings, dispersion of money balances, and money creation in the banking system and foreign lending. The market structure in which the banks concentrate on determines the supply of funds which in turn determines the availability of loanable funds (IBM, 2010).

With these factors determining long-term interest rates, short term interest rates are decided by financial and monetary conditions in the economy. Ownership structure like the government owned banks, there is likelihood that they tend to lend at low interest rate because they are likely to be sort out of financial crisis by the government (Salloum&

Hayek, 2012). According to Demircuc (2008) the many factors considered in loanable funds theory mean that equilibrium will be reached only when each of the factors is in equilibrium. Claeys and Vander (2008) argues that this theory explains the determinants of interest rate spread in that if people do not deposit money in commercial banks, the banks will fail to lend and the high demand will lead to higher charges by banks. This in the end causes interest rate spread to widen as a result of inflation. Ross (2005) strongly believed that the theory is however limited in that it fails to address the reasons why people would prefer to save and invest without necessarily having to deposit money in the banks like the fear of unknown, wealth taxation, delay in accessing the banked money among other factors.

The Theory of Interest

Craigwell, (2000) reviewed the Theory of Interest explains that explains the relationship between inflation and the real and nominal interest rates. In Craigwell, (2000) review noted that this relationship is known as the Fisher Effect arising from the Theory Proposer in 1930. The Fisher Effect states that an increase in the growth rate of the money supply will result in an increase in inflation and an increase in the nominal interest rate, which will match the increase in the inflation rate. Fisher (1930) first put forward that the relationship between interest rates and inflation is termed as the Fisher Effect. It postulates that the nominal interest rate in any period is equal to the sum of the real interest rate and the expected rate of inflation. Craigwell, (2000) studied that the nominal interest rate could be decomposed into two components, a real rate plus an expected inflation rate. Fisher indicated that there exist a one tone relationship between the inflation and interest rates in a perfect world, with real interest rates being unrelated to the expected rate of inflation and determined entirely by the real factors in an economy, such as the productivity of capital and investor time preference.

The fisher effect theory has the same conclusions with the International Fischer Effect (IFE). IFE theory suggests that foreign currencies with relatively high interest rates will tend to depreciate because the high nominal interest rates reflect expected rate of inflation, Madura (2000). This theory also proposed that changes in the spot exchange rate between two countries will also tend to equate the differences in their nominal interest rates (Craigwell, 2000). Fisher's rate of interest is important because it provides a basis for the idea that monetary policy should be concerned mainly with managing inflation expectations in order to keep real interest rates at a stable level that promotes saving and investment (Madura2000).

Modern Monetary Theory (MMT)

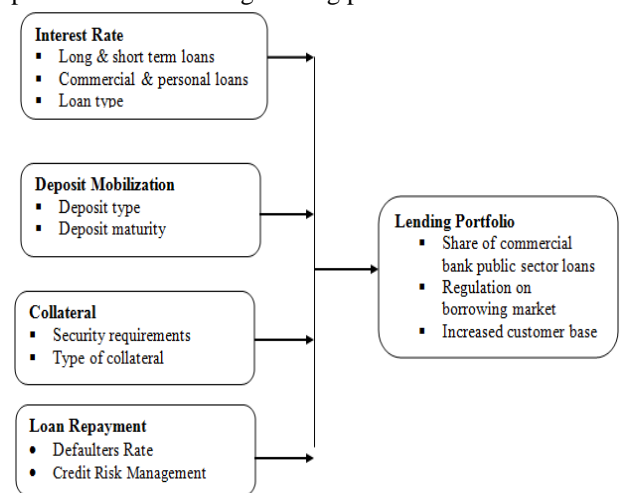
Modern monetary theory explains exclusively how the government, central bank and the commercial banking sector interacts, with some economists arguing that understanding of reserve accounting is critical to understanding monetary policy options. This theory was developed by a group of economist including Randal Wray (2009) and Bill Mitchell. All of the commercial banks will also have an account with the central bank. This permits the banks to manage their reserves that is, the amount of available short-term money that a particular bank holds. So when the government spends, treasury will debit its cash operating account at the central bank, and deposit this money into private bank accounts (and hence into the commercial banking system). This money adds to the total reserves of the commercial bank sector.

MMT argues that taxes and bond offerings are not best conceptualized as funding sources for the Treasury, but rather as reserve draining devices to maintain price and interest-rate stability (Tymoigne, 2013).

In most countries, commercial banks' reserve accounts with the central bank must have a positive balance at the end of every day; in some countries, the amount is specifically set as a proportion of the liabilities a bank have that is on its customers. This is known as a reserve requirement. At the end of every day, a commercial bank will have to examine the status of their reserve accounts. Those that are in deficit have the option of borrowing the required funds from the central bank, where they may be charged a lending rate which is also referred to as the discount rates on the amount they borrow. In a balanced system, where there are just enough total reserves for all the banks to meet requirements, the short-term interbank lending rate will be in between the support rate and the discount rate. Both the Treasury and the central bank are involved in these reserve management operations to maintain interest rate stability (Palley, 2012).

Conceptual Framework

In a broad sense a conceptual framework can be seen as an attempt to define the nature of research. A conceptual framework considers the theoretical and conceptual issues surrounding research work and form a coherent and consistent foundation that will underpin the development and identification of existing variables (ACCA, 2011). This study sought to establish financial factors affecting lending portfolio in commercial banks in Kenya. The independent variables in this study will be Interest rates, deposit mobilization, collateral and loan repayment and the dependent variable being lending portfolio.



(Independent variables)

(Dependent variable)

Figure 2.1. Conceptual Framework.

Lending Portfolio

According to Comptroller's (2008) loan portfolio is the largest asset and the predominate source of revenue. As such, it is one of the greatest sources of risk to a bank's safety and soundness. The level of interest risk attributed to the bank's lending activities depends on the composition of its loan portfolio and the degree to which the terms of its loans (e.g., maturity, rate structure, and embedded options) expose the bank's revenue stream to changes in rates.

According to Hirtle (2008) an effective loan portfolio management begins with oversight of the risk in individual loans. Prudent risk selection is vital to maintaining favorable loan quality. Therefore, the historical emphasis on controlling the quality of individual loan approvals and managing the

performance of loans continues to be essential. But better technology and information systems have opened the door to better management methods. A portfolio manager can now obtain early indications of increasing risk by taking a more comprehensive view of the loan portfolio (Hirtle, 2008).

According to Sanchez (2009), loan portfolio managers have concentrated most of their effort on prudently approving loans and carefully monitoring loan performance. Although these activities continue to be mainstays of loan portfolio management, analysis of past credit problems, such as those associated with oil and gas lending, agricultural lending, and commercial real estate lending in the 1980s, has made it clear that portfolio managers should do more. Traditional practices rely too much on trailing indicators of credit quality such as delinquency, non-accrual, and risk rating trends. Banks have found that these indicators do not provide sufficient lead time for corrective action when there is a systemic increase in risk (Sanchez, 2009).

To manage their portfolios, bankers must understand not only the risk posed by each credit but also how the risks of individual loans and portfolios are interrelated. These interrelationships can multiply risk many times beyond what it would be if the risks were not related. Until recently, few banks used modern portfolio management concepts to control credit risk. Now, many banks view the loan portfolio in its segments and as a whole and consider the relationships among portfolio segments as well as among loans. These practices provide management with a more complete picture of the bank's credit risk profile and with more tools to analyze and control the risk (Gonzalez, 2010).

Interest Rates

According to Théoden and Nathan(2010) they noted that when interest are low people are willing to borrow lending rates because they find it relatively easy to repay their debts .However when interest are high people are reluctant to borrow because repayment on loans cost more . Some consumers may even find it difficult to meet their existing loan repayments, especially if interest rate increases faster than the rise in the consumer income. In addition, if rates rise sharply some consumers will default on their loans. These points out those high rates can hinder the growth of savings and investments and imply that the cost of using the financial system is prohibitive for certain borrowers and therefore low margin.

Ndungu and Ngugi(2011) explained that macroeconomic environment is identifying as both a cause and a consequence affecting lending rates. The chain reaction triggered off by macroeconomic instability increases uncertainty hence impacting adversely on borrower's credit worthiness thus increasing the risk premium charged by banks. The macroeconomic environment affects the performance of the banking sector by influencing the ability to repay borrowed loans, the demand for loans with the unpredicted returns from investments and the quality of collateral determine the amount of premium charged and therefore the cost of borrowed funds to the investors. With an unstable macroeconomic environment and poor economic growth, investors face uncertainty about investment return and these raises the lending rates.

Baghwan&Chowdhry (2010) concur that the bank profit is derived from the difference between the interest rate it charges by lending and interest it pays for the deposit. If bank is not lending then there are no profits from the deposits.

Therefore, high lending rates can have a major implication for financial intermediation as they can increase the cost of capital which in turn limits financial resources available to potential borrowers thereby reducing the volume of investment opportunities and reducing it to sub optimal level. Moreover wider spread might reflect a number of problems such as bank unsoundness and moral hazard.

Chodechai, (2014) indicated that loans that have been made or bought and are being held for repayment qualifies to be grouped a loan portfolio. Loan portfolios are the major asset of banks, thrifts, and other lending institutions. The value of a loan portfolio depends not only on the interest rates earned on the loans, but also on the quality or likelihood that interest and principal will be paid (Chodechai, 2014). Effective management of the loan portfolio and the credit function is fundamental to a bank's safety and soundness. Loan portfolio management (LPM) is the process by which risks that are inherent in the credit process are managed and controlled. Because review of the LPM process is so important, it is a primary supervisory activity. Assessing LPM involves evaluating the steps bank management takes to identify and control risk throughout the credit process. (Chodechai, 2014).

Mobilization of Deposit

Digaria(2011) noted that mobilization of deposit for a bank is as essential as oxygen for human being. Deposit mobilization is one of the main functions of banking business and so an important source of working fund for the bank. Deposit mobilization is the collection of cash or funds by a financial institution from the public through its current, savings, fixed, recurring accounts and other specialized schemes. Since deposits are normally considered as a cost effective source of working fund, the bank's ability to lend more as well as its success greatly lies on its deposit mobilization. However the bank's ability to mobilize enough funds from the public through its current, savings, fixed, recurring accounts and other specialized schemes will depend on the systems employed in this highly competitive industry (Digaria, 2011).

Ngugi (2011) found that banking over the years has lived up to its definition of safe keeping of customers funds and ensuring that the customers get the money upon demand. And this has been the basic function of banking just as a raw material is for a business; to banking institution is cash. Cash mobilization therefore the world over has continually been part of the primary and important component of banking. In both retail and corporate banking, this important aspect of banking has been practiced in different forms with the commonly known aspect being direct deposit by the customer in the banking hall. Withdrawal of cash is also made in the banking halls or any permitted premises as approved by the bank or financial institution (Nakane, 2002).

According to Laura, Alfred, Sylvia(2009), to mobilize more deposits, financial institutions offer a range of savings products that are tailored to their particular clientele. They offer the widest variety of specialized savings products, so that their customers have a choice between immediately accessible, liquid products, or semi-liquid accounts or time deposits with accordingly higher interest rates. Simple and clear design of basic savings products enables depositors to easily select the product that best suits their needs. The simple and transparent design of the savings products also enables staff to administer them with ease, reducing administrative costs.

Collateral

Collateral can generally be described as a defined asset issued by the borrower to the lender, in a show of commitment towards repaying the loan advanced. If the counterparty fails to honor his repayments, the collateral is liquidated and the value of the loan recovered from such proceeds. Collateral involves contractual arrangements revolving around the defined asset which are generally difficult to implement in developing and least developed countries that have diverse and weak legal and regulatory systems. Globally, there exist several forms of collateral accepted by banks for the purpose of guaranteeing the recovery of loans like personal guarantors, receivables, fixed deposit accounts among others (Winton 2005).

Udell (2005) investigate the relationship between collateral and credit risk on a sample of 1 million loans from US banks. In a first part, these authors test the hypothesis that adverse selection matters for the use of collateral by regressing risk premium on a set of loan characteristics including a dummy variable considering whether the loan is collateralized or not. The conclusion does not corroborate the adverse selection argument, as a positive and significant relationship is observed between collateral and risk premium. This result may be explained by the fact that banks require more collateral from riskier borrowers who are also charged with higher loan rates. In a second part, several ex post measures of risk, including net charge offs to loans and loan repayments past due to loans, are regressed on a set of borrower characteristics aggregating information by loan, so that this regression is performed at the borrowers level. They observe that collateral is associated with credit risk. This work concludes in favor of a positive relationship between collateral and credit risk, which prompts banks to ask more collateral from riskier companies, and consequently to charge them with higher loan rates.

Spiliotis (2008) enhance earlier study on the determinants of commercial banks' lending behaviour to commercial firms Greece by inferring on the Post-Keynesian notion that banks lend money for purposes of execution of production activities by firms. The study uses firm expenses as well as general macroeconomic monetary indicators to predict the level of loan advances to industrial, hand craft and trade companies in Greece. The loan predictor variables are last period loan amount, employment costs or wage bill, corporate tax expenses and deposits.

Jimenez and Saurina (2004) focus on the determinants of the probability of default of bank loans on a wide set of 3 million loans provided by Spanish banks. Probability of default is considered as an ex post credit measure. Therefore they test whether both arguments of the use of collateral based on information asymmetries are validated, namely whether the presence of collateral brings down the probability of default. The probability of default is explained by a set of loan characteristics including some information on the collateral. The three dummy variables depending on the collateralized share of the loan are jointly taken into account in the model. They find a greater probability of default for secured loans.

Goodluck (2016) studied the effects of collateral on loan repayment. Specifically he measured how the use of movable and immovable assets affects loan repayment and delinquency rate, and assess the extent to which guarantors and relationship-lending act as collateral to improve loan repayment.

The results suggested that movable assets increase the likelihood that borrowers perceived to be less creditworthy will obtain loans from informal sources and repay them

Loan Repayment

Ogol (2013) carried out a study to investigate factors affecting loan repayment among customers of commercial Banks in Kenya with specific reference to Barclays Bank of Kenya Limited. The study achieved its purpose through three objectives namely to determine the effect of Lenders factors on loan repayment among customers of commercial Banks in Kenya, to find out the extent to which Borrowers factors affect loan repayment among customers of commercial Banks in Kenya and finally to establish the effect of loan factors on loan repayment among customers of commercial Banks in Kenya. The study concluded that there was a significant relationship between individual borrowers' factors and the loan repayment among customers of commercial banks in Kenya. The study further concluded that there is a significant relationship between loan factors and loan repayment among customers of commercial banks in Kenya.

Kiliswa (2012) conducted a study with the objective of identifying the major determinants of loan repayment in Small Scale Enterprises (SSEs) with particular reference to SSEs in Kariobangi Division, Nairobi County. In addition, education level, family size, amount of loan applied and business experience of the respondents were found to have a positive relationship to loan repayment. Age, interest rate and change in gender had an inverse relationship to loan repayment. The study recommended that more loans should be advanced to female SSE owners aged 30-40s as they proved to be the least loan defaulters. SSEs in Kariobangi division should use prequalified suppliers in order to minimize variation in input prices. The financial institutions should provide financial education and awareness to SSE owners as they are less educated.

Apunyo (2011) did a study that sought to determine the effect of interest rates on loan repayment in Uganda's commercial banks using study of Equity bank. The analysis was implemented based on data obtained from 10 bank officials and 50 customers. The data analysis was based on the objectives of the study and done by use of Statistical Package for Social Sciences on collected data. The result of the study reveals that there is to great extent a close relationship between interest rates and loan repayment in conjunction with business growth and performance. High interest rates, coupled with lack of entrepreneurial skills were seen as the major factors that have a direct bearing with the loan repayment among Equity Bank loan customers.

According to a study by Nguyen, (2014) consumer character is rarely the result of a single motive. Several factors combine to make one buy or consume a product or service; or a borrower to promptly repay or default repayment of a facility. Character primacy theory holds that, common character results mainly from an individual's interactions with the environment. As the environment changes, individuals tend to cope by changing their character. Thus bank borrowers' character is determined by economic, cultural, social, psychological, personal and political factors: Economics was the first discipline to construct a specific theory of buying character.

Methodology

Research design is an arrangement of conditions for collection and analysis of data in a way that combines their relationship with the purpose of the research (Chandran,

2011). This study used mixed research design. Some authors regard this approach as the third methodological movement one which complements purely quantitative or qualitative strategies. The mixed methods design can be determined by both priority and implementation of data collection (Onwuegbuzie et al., 2009). The mixed methods approach will be selected for this study as it enables the researcher to collect well rounded and detailed data that is not only numerically descriptive but also enables the study to gather multiple views and different perspectives (Creswell, 2009)

The target population of this study will be all heads of credit related departments (Credit manager, Branch manager and Relationship manager) who are concerned with policies implementation in 43 commercial banks in Kenya as outlined in appendix III (Kenya Bankers Association, 2016).

This study adopted stratified random sampling technique to select the sample size for the study.

According to Deming (2010) stratified random sampling technique produces estimates of overall population parameters with greater precision and ensures a more representative sample is divided from a relatively homogeneous population. Stratified random sampling will be used to group respondents into three strata namely; Credit manager, Branch manager and relationship manager. Orodho (2003) states that stratified sampling is applicable if a population from which a sample is to be drawn does not constitute a homogeneous group. According to Mugenda and Mugenda (2003), a representative sample is one that is at least 10% of the population of interest but for better and more representative results a higher percentage is better. In this case, a sample size of 50% will be preferred. The sample population of the study will thus be 62 respondents i.e. 50% of the study population.

The regression model for this will be;

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

Where

Y = Lending Portfolio (dependent variable)

β_0 = Constant

X_1 = Lending

X_2 = Deposit Mobilization

X_3 = Collateral

X_4 = Interest Rate Risk

ϵ = An error term

$\beta_1 \dots \beta_4$ = The corresponding coefficients for the respective independent variables

Research Findings

Interest Rate in commercial Banks

Interest rate was one of the independent variables. Respondents rated the statements on interest rate on a scale of 1=Strongly Disagree, 2=Disagree, 3=Moderate, 4=Agree and 5=Strongly Agree. The mean of the responses and the corresponding standard deviation of each item were used to gauge the level of agreement to statements on interest rate. The result presented in table 4.1 indicated that all the items had a mean score more than four (=agree on the Likert scale). Thus it meant that; interest rate spread follows the direction of economic growth ($m=4.22$, $SD=.749$). This implied that the interest rate is affected by changes in economic performance according to the respondents.

Interest rate spread was the highest contributor of profits in a bank ($m=4.13$, $SD=.810$). This implied that banks being profit minded will tend to charge their loans at the highest rate possible. Interest rate spread follows the inflation rates of the countries ($m=4.41$, $SD=.912$). Therefore changes in inflation of a country would result to changes in interest rate.

However it was not clear if the interest rate charged in the banks was reasonable compared to other banks ($m=3.02$, $SD=.619$). These findings implied that the interest rate charged is not significantly different across banks.

According to Théoden and Nathan (2010) they noted that when interest is low people are willing to borrow lending rates because they find it relatively easy to repay their debts. Therefore potential borrowers may look at other loaning factors other than interest rate that may make borrowing cheaper or easier to repay.

Table 4.1. Interest Rate in commercial banks.

Statement on interest rate	Mean	S.D
Interest rate spread follows the inflation rates of the countries	4.41	.912
Interest rate spread follows the direction of economic growth	4.22	.749
Interest rate spread is the highest contributor to profits in a bank	4.13	.810
Interest rate charged in this bank is reasonable compared to other banks	3.02	.619

Deposit Mobilization on the Lending Portfolio

The result in table 4.2 shows the mean and standard deviation of responses on statements on deposit mobilization. The mean values are approximately four or above, implying that the respondents were in agreement to all statements on deposit mobilization. Specifically, the high interest rate has an effect in the increase in deposits ($m=3.83$, $SD=.258$) thus implying that managers the banks greatly use Agency banking as a channel to mobilize deposits ($m=3.88$, $SD=.982$), termination of contract by depositor has an effect in the increase in deposits ($m=3.98$, $SD=.859$), short term deposit period has an effect in the increase in deposits ($m=4.10$, $SD=.692$) and easy innovative ways of opening term deposit accounts ($m=4.12$, $SD=.622$).

Table 4.2: Deposit Mobilization in commercial banks.

Statement on Deposit Mobilization	Mean	SD
There are efficient deposit mobilization mechanisms in this bank	3.83	.258
The banks greatly use Agency banking as a channel to mobilize deposits	3.88	.982
Termination of contract by depositor has an effect in the increase in deposits	3.98	.859
Relatively short term deposit period has an effect in the increase in deposits	4.10	.692
There are easy and innovative ways of opening term deposit accounts	4.12	1.022

Effect of Collateral on lending portfolio

The result in table 4.3 shows the mean and standard deviation of responses on statements on deposit mobilization. The mean values are approximately four or above (agree), implying that the respondents were in agreement that banks depend on the customers collateral when conducting Credit

Table 4.3. Collateral in Commercial banks.

Statement on Collateral	Mean	SD
the customer's collateral is key consideration when conducting Creditworthiness analysis	4.43	.591
Risk identification is positively significant to influence risk management practices.	4.38	.744
Collateral requirements depend on the credit rating of a borrower	4.18	1.002
The amount of collateral needed depends on loan amount applied for	4.14	1.099

Table 4.5. Correlation coefficient between independent variables and dependent variable.

	Interest rate	Deposit mobilization	collateral	Repayment	Lending portfolio
Interest rate Sig.	1	.568 (.000)	.783 (.000)	.686 (.000)	-.699 (.003)
Mobilization Sig.	.568 (.000)	1	.050 (.550)	-.107 (.197)	.689 (.000)
Collateral Sig.	.783 (.000)	.050 (.550)	1	.774 (.000)	-.254 (.002)
Repayment Sig.	.686 (.000)	-.107 (.197)	.774 (.000)	1	.396 (.007)
Lending Sig.	-.699 (233)	.689** (.000)	-.254 (.002)	-.296** (.000)	1

worthiness analysis ($m=4.43$, $SD=.591$), risk identification is positively influence risk management practices ($m=4.38$, $SD=.744$), amount of collateral required depends on credit rating of a borrower ($m=4.18$, $SD=1.002$) and The amount of collateral needed depends on loan amount applied for ($m=4.14$, $SD=1.099$).

Loan Repayment in commercial banks

Based on the result in table 4.6, it is the respondents were not sure if lack of entrepreneurial skills had an effect on loan repayment ($m=3.40$, $SD=.792$), but agreed that interest rate paid on term deposits had an effect on loan repayment ($m=4.12$, $SD=.379$). Loan repayment policies favour loan repayment ($m=3.4$, $SD=.493$) and it wasn't clear if the amount of loan applied has a great effect on loan repayment ($m=3.2$, $SD=.721$).

Table 4.4. Loan Repayment in Commercial banks in Kenya.

Loan Repayment	Mean	S.D
The percentage of non-repayment cases are on the decline	3.60	.792
High interest rate paid on term deposits has an effect on loan repayment	4.12	.379
Loan repayment policies encourage loan	3.4	.493
The amount of loan applied has a great effect on loan repayment	3.2	.721

4.1. Correlation Analysis Result

To establish the relationship between each of the four independent variables and dependent variable, a correlation analysis was run. The correlation coefficient table 4.5 show that interest rate was negatively and correlated with lending portfolio ($r=-.699$, $p=.003$). The correlation was significant. The findings are similar to the findings by Apunyo (2011). In his study to determine the effect of interest rates on loan repayment in Uganda's commercial banks using study of Equity bank, Apunyo found that there is to great extent a close relationship between interest rates and loan repayment.

Deposit mobilization was positively and significantly correlated with lending portfolio ($r=.689$, $p=.000$). This imply that as bank's ability to mobilize enough funds from the public through its various instruments like current, savings, fixed and recurring accounts the higher the loan portfolio.

Collateral was also negative correlated with lending portfolio ($r=-.254$, $p=.002$). however Goodluck(2016) studies suggested that movable assets increase the likelihood that borrowers perceived to be less creditworthy will obtain loans from informal sources and repay them thus increasing loan portfolio

Udell (2005) investigate the relationship between collateral and credit risk on a sample of 1 million loans from US banks. He found a positive and significant relationship is observed between collateral and risk premium.

This result may be explained by the fact that banks require more collateral from riskier borrowers and thus an inverse relation between collateral and loan portfolio.

Loan repayment was found to positively significant correlated with lending portfolio ($r=.3996$, $p=.007$). This implied that, good repayment behaviour of borrowers the higher the loan portfolio value and quality. On the other hand, the more unfavourable repayment behaviors of borrowers are, the poor the quality and value of loan portfolio.

Regression Analysis Results

Model summary

The four independent variables were regressed against lending portfolio. The purpose was to determine the overall effect of each independent variable on loan portfolio when other factors are taken into account.

The model summary table 4.8 shows that the overall correlation between the dependent variable and the independent variables was strong ($r=0.876$). The R square value (coefficient of determination) was 0.767; this implied that the four predictor variables accounted for 76.7% of the variations in loan portfolio quality. The remaining percentage (23.7%) is accounted for by other factors not included in this regression model. These other factors not considered in this study could form the basis of other studies.

Table 4.6. Model Summary.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.876	.764	.742	.38380

a. Predictors: (Constant), planning, supervision, participative and funding

ANOVA Result

The analysis of variance result (ANOVA) in table 4.7 revealed that the model was significant ($F=42.238$, $p=.000$). This implied that the fitted regression model was appropriate in prediction of loan portfolio in commercial banks in Mombasa County at given level of independent variables. And thus the regression model can be fitted with the regression coefficients shown in table 4.8

Table 4.7. ANOVA.

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	75.521	4	18.880	42.238	.000 ^p
Residual	20.999	44	.447		
Total	96.52	48			

a. Dependent Variable: loan portfolio, predictors; interest rate, deposits, collateral, repayment

Regression Coefficients

The coefficient table 4.8 provides the regression coefficient for each predictor variable and the regression constant of the regression model for fitting. The coefficient of regression constant is 0.346 ($p=0.210$), and is not significant. For interest rate it is 0.438 ($p=008$) and it is significant.

Regression coefficients for deposit mobilization is 0.342 (p=0.001) and significant. Collateral 0.720 (p=0.000) and it is significant and loan repayment was 0.485 (p=0.000) and also significant. Therefore this study suggested the following fitted regression model;

$$\text{Portfolio} = 0.346 - 0.438\text{Interest Rate} + 0.324\text{Deposit Mobilization} + 0.720\text{Collateral} + 0.485\text{repayment}$$

From the fitted model, an increase in one unit of the Interest rate will result to a decrease in loan portfolio by 0.4381 units. An increase in deposit mobilization by one unit will result to an increase in loan portfolio by 0.324 units. A unit increase in collateral will result will result in an increase of loan portfolio by 0.720 units. And finally, an improvement in loan repayment by one unit will result in increase in loan portfolio by 0.485 units. These result shows that collateral had the highest contribution to loan portfolio.

Table 4. 8. Regression Coefficients.

Model		Unstandardized		Standardized	t	Sig.
		Beta	Std. Error	Beta		
I	(Constant)		.486	.346	.827	.410
	Interest rate	-.438	.224	.215	1.956	.008
	Mobilization	.324	.101	.239	3.387	.001
	Collateral	-.720	.131	.617	6.181	.000
	Repayment	.485	.340	.626	1.841	.044

Dependent Variable: Lending portfolio

Conclusions

From the summary of findings, this study made the following conclusions;

Interest rate policies by banks on the loans advanced to the borrowers has direct effect on the quality and value of the loan portfolio. It is therefore inferred that banks with favourable and reasonable interest rate policies have sound loan portfolio. This is true because interest rate determines the cost of the principal amount loaned. And thus ones' ability to service his loan is reduced at high interest rate.

Banks place a lot of emphasis in deposit mobilization activities. This is necessitated because deposit mobilization is the bedrock of bank's source of financial. It is concluded that as more deposit mobilization efforts are made, the lending portfolio will also increase in value. Thus banks with vibrant deposit mobilization efforts have a sound financial base. These are efforts directed towards collecting cash through current, savings, fixed, recurring accounts and other specialized schemes.

The higher the collateral value needed by a bank for a particular loan amount, the low the amount of loan taken. As banks put great emphasis on collateral of borrower, the probability of loan default also decreases. Thus, collateral requirements increase quality of loans taken (low probability of default) but decreases number of qualified borrowers. This is the case because some potential borrowers may have no required collateral.

A high rate of repayment of loans by customers results to quality and value lending portfolio of that bank. This high rate depends on the repayment terms and policies banks have in place with attractive terms and policies will have quality and valuable lending portfolio.

Recommendations

The following are some of the key recommendations of the study.

Interest rate is the source of bank profit but it raises the cost of loans to the customers. Therefore Commercial banks should charge an interest rate that strikes a balance between the two outcomes. It should ensure it does not make the cost of borrowing unaffordable that may lead to some borrowers to default.

Lending rate is affected by macroeconomic and microeconomic environment and other factors like inflation. The government and other stake holders should ensure that they have programs and strategies that trigger economic growth in a country. The growth will make it easier for citizens to be financially sound and thus empower them financially to repay their loans.

Deposit mobilization is the primary source of finance to the banks and it has a direct relationship with lending portfolio. Therefore the banks should be innovative in attracting finances from the public for safe keeping of customers' funds and ensuring that the customers get their money upon demand. The banks should make the access to business transactions easy and affordable like the mobile banking platform.

Collateral requirements conditions aim to minimize the effect of non-payment of the bank loan by a borrower. Collateral requirement depends on the credit rating of a borrower. There should be credible and up-to-date systems in place that accurately rate the potential borrowers.

This study proposes that repayment terms and other changes should be reviewed regularly and clearly communicated between the bank and the borrower. By so doing, the parties are able to take advantage of any changes that may come up and thus increase the chance of meeting his repayment obligations.

Recommendation For Further Studies

The current study recognized that repayment rate as one of the key determinants of the quality and value of lending portfolio. A complementary study that examines the causes of non-repayment in commercial banks will be ideal.

Another study should be carried out that investigates the role of lending portfolio on bank's financial performance.

The current study was limited to examining the role interest rate, loan mobilization, collateral and loan repayment on lending portfolio of commercial banks in Mombasa. A comprehensive study should be undertaken that also takes into account the role macroeconomic factors on lending portfolio of commercial banks.

References

- Altman, E.I, Haldeman, R. G. & Narayanan, P. (1977). *Zeta Analysis: A new model to identify Bankruptcy Risk of Corporations*. Journal of Banking and Finance, 1, pp 29-54.
- Ang, J, Lin, J & Tyler F. (1995). *Evidence on the lack of separation between Business and Personal Risk among small Business*. Journal of Small Business Finance, 4, 197-210.
- Ausubel L (1991). *The Failure of Competition in the credit Card Market*. American Economic Review 81, pp 50-81.
- Avery, R, Bostic, R & Samolyk K. (1998). *The role of Personal Wealth in Small Business Finance*. Journal of Banking and Finance, 22, pp 1019-1061.
- Awuor C. (2008). *A survey of the use of financial ratios commercial banks*. Unpublished MBA project.

- Bae, K. H. & V.K Goyal (2009). *Creditor Rights, Enforcement and Bank Loans*. Journal of Finance, 64, 823-860.
- Behr P., Entzian, A. & A. Guttler (2011). *How do Lending Relationships affect access to Credit and Loan Conditions in Micro lending?* Journal of Banking and Finance, 35, 2169-2178.
- Belyanova E. & I. Rozinsky (1995). *Evolution of Commercial Banking in Russia and the Implications of Corporate Governance*. Pp 185-214.
- Bemanke, Ben S. & Mark Gerther (1989). *Agency Costs, Net Worth and Business Fluctuations*. American Economic Review, 79, 14-31
- Bemanke, Ben S. & Mark Gerther (1990). *Financial Fragility and Economic Performance*. Quarterly Journal of Economics, 105, 87-114.
- Berger, Allen N, & Gregory F. Udell (1990). *Collateral Loan Quality and Bank Risk*. Journal on Monetary Economics, 25, pp 21-42.
- Berger, Allen N, & Gregory F. Udell (1995). *Relationship Lending and Lines of Credit in Small Business Finance*. Journal of Business, Vol (68), pp 351-382.
- Berger, Allen N, & Gregory F. Udell (2002). *Small Business Credit Availability and Relationship lending: The importance of Bank Organizational structure*. Economic Journal Vol (127), pp 32-53.
- Berger, Allen N, & Gregory F. Udell (2006). *A more complete conceptual framework for SME finance*. Journal of Banking and Finance. Vol (11), pp 2945-2966.
- Berglof, E (1995). *Corporate Governance in Transition Economies: The theory and its Policy Implications*, 9, pp 59-95.
- Besanko D, Thakor A., (1987). *Collateral and rationing: Sorting Equilibrium in Monopolistic and Competitive Credit Markets*. International Economic Review Vol, (28), pp 671-689.
- Bessis, Joel. *Risk Management in Banking (1998)*. John Wiley and Sons LTD. 1st Edition.
- Bester H., (1985). *Screening Vs Rationing in Credit Market with Imperfect Information*. American Economic Review, Vol, (75), pp 850-855.
- Bigsten, Arne & Kimuyu, Peter. (2000). *Structure and performance of Manufacturing in Kenya*. New York: Palgrave.
- Black. F, Scholes M, (1973). *The Pricing of Options and Corporate Liabilities*. Journal of Political Economy, 637-659.
- Boot A. (2000). *Relationship Banking: What do we know?* Journal of Financial Intermediation, 9, pp 7-25. 55
- Boot W. A, Thakor A & Udell G. F. (1991). *Secured Lending and Default Risk: Equilibrium Analysis, Policy Implications, and Empirical Results*. Economic Journal, 101, 458-72.
- Bopaiah, C. (1998). *Availability of Credit to Family Business*. Small Business Economics, 11, pp 75-86.
- Borio C, N Kennedy & S Prowse (2002). *Exploring Aggregate Asset Price Fluctuations across Countries: Measurements, Determinants and Monetary Policy Implications*. BIS Economic papers, No. 40. Basel April.
- Brick I. E & Palia, D. (2007). *Evidence of Jointness in the Terms of Relationship Lending*. Journal of Financial Intermediation, 16, pp 452-476.
- Carey M, Post, M & Sharpe S.A (1998). *Does corporate Lending by Banks and Finance Companies differ? Evidence on Specialization in Private Debt Contracting*. Journal of Finance, 53, pp 845-78.
- Chan, Y. S & Kanatas G. (1985). *Asymmetric Valuation and the Role of in Loan Agreement*. Journal of Money, Credit, and Banking, 17, pp 85-95.
- Chodechai, S. (2004). *Determinants of Bank Lending in Thailand: An Empirical Examination for the years 1992-1996*, Unpublished Thesis.
- Cohen, J. & Manion, P. (1980). *Research Designs*. Beverly Hills Ca. Sage Publishers.
- Collender R. N & Shaffer S. (2003). *Local Bank Office Ownership, Deposit Control, Market Structure and Economic Growth*. Journal of Banking Finance, Vol (27), pp 27-57.
- Cressy R. (1996). *Commitment Lending under Asymmetric Information: Theory tests on UK startup data*. Small business Economics, 8, 397-408.
- Davydenko, Sergei, & Julian Franks (2005). *Do Bankruptcy Codes Matter? A Study of Default in France, Germany and the UK*. EFA, Moscow Meeting Paper. 56
- Degryse H., M. Kim & S. Ongena (2008). *Micro econometrics of Banking Methods, Applications, and Results*. Oxford University Press.
- Dennis, S., Nandy D. & Sharpe I. (2000). *The Determinants of Contract Terms in Bank Revolving Credit Agreement*. Journal of Finance and Quantitative Analysis, 35, pp 87-110.
- Eriksson, L T., Wiedersheim, Paul F, (2001). *Attutreda, Forska Och Rapportera, Libe*. Ekonomi, Malmo.
- Ewert, R., Szczesony, A & Schenk, G. (1998). *Determinants of Bank Lending Performance*. CFS working paper no. 98/06. Centre of Finance Studies. University of Frankfurt. Germany.
- Ewert, R., Szczesony, A & Schenk, G. (2000). *Determinants of Bank Lending Performance in Germany*. Schmalenbach Business Review (SBR), 52, pp 344- 362.
- Financial Sector Deepening-Kenya (2009). *Cost of collateral in Kenya; Opportunities for Reform*. Nairobi. FSD-Kenya.
- Gambera, M (2000). *Simple forecast of Bank Loan Quality in the Business Cycles*. Federal Reserve Bank of Chicago.
- Gan, Jie (2007). *Collateral, Debt Capacity and Corporate Investment*. Journal of Financial Economics, 85, 709-734.
- Gollinger, T.L & J.B Morgan (2003). *Efficient Frontier for a Commercial Loan Portfolio*. The Journal of Portfolio Management. Winter 2003, pp 39-46.
- Gonas, John, Highfield, Michael, & Donald Mullineaux (2004). *When are Commercial Loans Secured?* The Financial Review 39, 79-99.
- Goodhart, C. A. E (2004). *The Bank of England 1970-2000. Ch. 17 in R. Michie (ed)*. The British Government and City of London in the Twentieth Century. Cambridge University Press, 340-71. 57
- Greenbaum, S., G. Kanatas & I. Veneza (1989). *Equilibrium Loan Pricing under the bank- client Relationship*. Journal of Banking and Finance, 13, pp 221-235.
- Greenbaum S. & Thakor A. (1995). *Contemporary Financial Intermediation*. Dryden Press Orlando.
- Guttentag, J. & R. Herring (1984). *Credit Rationing and Financial Disorder*. The Journal of Finance, 39, pp 1359-1382.
- Hainz, C, (2003). *Bank Competition and Credit Markets in Transition Economies*, Journal of Comparative Economics, 31, 223-245.
- Haselmann, R. & P. Wachtel (2006). *Institutions and Bank Behaviour*. NYU Stern Economics, Working Paper No. 06-16.

- Inderst R. & H.M Mueller (2007). *A Lender- Based Theory of Collateral*. Journal of Financial Economics, Vol (84), No. 3, pp 826-859.
- Jackson, T.H & Kronman A.T (1979). *Secured Financing and Priorities among Creditors*. The Yale Law Journal, 88, 1143-1182.
- Jimenez G, & J. Saurina (2004). *Collateral Type of Lender and Relationship Lending as Determinants of Credit Risk*. Journal of Banking and Finance, 28, pp 2191-2212.
- Jimenez, G. V. Salas & J. Saurina (2006a). *Determinants of Collateral*. Journal of Financial Economics, 81, pp 251-281.
- Karumba M, & Wafula M, (2012). *Collateral Lending: Are there Alternatives for the Kenyan Banking Industry: KBA Centre for Research on Financial Units and Policy*. Working Paper Series 3.
- Kerlinger, F N (1973). *Foundations of Behavioral Research*. New Delhi, Surfeet Publishers.
- Kiyatoki, Nobuhiro and John Moore (1997). *Credit Cycles*. Journal of Political Economy, 105, 211-248. 58
- Klapper L. (1999). *The Uniqueness of Short term Collateralization*. Working Paper, Washington DC. World Bank.
- Kobayashi, K., Y. Saita & T. Sekine (2002). *Forbearance Lending: A Case for Japanese Firms*. Bank of Japan Research and Statistics Department, Working Paper No. 02-2.
- Kwan, S & R. Eisenbeis (1994). *An Analysis of Inefficiencies in Banking: A Stochastic Cost Frontier Approach*. Federal Reserve Bank of San Francisco, Applied Economic Theory, Working Paper No. 95-12.
- La Porta (1998). *Law and Finance*. Journal of Political Economy, Vol, 106 pp 1113-55.
- La Porta R. Lopez-de-Sinales. F, Shleifer A & Vishny R (1997). *Legal Determinants of External Finance*. Journal of Finance Vol. 52, pp 1131-50.
- Leeth J.D., & Scott J.A. (1989). *The incidence of Secured Debt: Evidence from the small Business Community*. Journal of Financial and Quantitative Analysis, Vol (24), pp 379-394.
- Lehmann E & Neuberger D. (2001). *Do Lending Relationship matter? Evidence from Bank Survey Data in Germany*. Journal of Economic Behaviour and Organization, 45, 339-359.
- Mann R.J., (1997a). *Explaining the Pattern of Secured Debt*. Harvard Law Review, Vol (110), pp 625-683.
- Mann R.J., (1997b). *The Role of Secured Debt in Small Business Lending*. The Georgetown Law Journal, Vol, (86), pp 1-44.
- Markowitz H. (1952). *Portfolio Selection*. The Journal of Finance, March, pp 77-91.
- Menkhoff, L., Neuberger, D & C. Suwanaporn (2006). *Collateral Based Lending in Emerging Markets; Evidence from Thailand*. Journal of Banking and Finance, 30, 1-21. 59
- Mugenda, O.M, & Mugenda, A.G (2003). *Research methods; Quantitative and qualitative approaches*. Acts press., Nairobi
- Owuor B. (2008). *A survey of credit default prediction factors of commercial banks in Kenya*. Unpublished MBA project.
- Panagopoulos, Y. & Spiliotis, A. (1998). *The determinants of commercial Banks Lending Behaviour: Some Evidence from Greece*. Journal of Post Keynesian Economics Vol, (20), No. 4, pp 649-672.
- Peek, J. & E. Rosengren (2004). *Corporate Affiliations and (MIS) allocation of Credit*. Federal Reserve Bank of Boston, Working Paper No. 15-5.
- Rajan R.G (1992). *Insiders and Outsiders the choice between Informed and Arms-Length Debt*. The Journal of finance, 49, 1367-1399.
- Rajan R.G & Winton A (1995). *Covenants and Collaterals as Incentives to Monitor*. Journal of Finance, 50, 1113-46.
- Rosenberg, R., Gonzalez, A., & Narain, S. Forthcoming. *"The New Moneylenders: Are the Poor Being Exploited by High Microcredit Interest Rates?"* Focus Note. Washington, D.C.: CGAP.
- Sekaran, U. (1992). *Research Methods for Business: A Skill Building Approach*, John Wiley NY.
- Schulze, W., Lubatkin, M & Dino, R (2003). *Explaining the Agency Consequences of Ownership Dispersion among the Directors of Private Family Firms*. Academy of Management Journal, 46 (2), pp 179-194.
- Scott, J.H., Jr. (1977). *Bankruptcy, Secured Debt and Optimal Capital Structure*. Journal of Finance, 32, 1121-48.
- Sharma P., Chisman, J. J, & Chua J. H. (1997). *Strategic Management of the Family Business: Past research and Future Challenges*. Family Business Review, 10, pp 1-35. 60
- Steijvers, T & W. Voordeckers (2009). *Collateral and Credit Rationing: A Review of recent Empirical Studies as a Guide for Future Research*. Journal of Economic Survey, 23, 924-946.
- Stiglitz J., & Weiss A (1981). *Credit Rationing in Markets with Imperfect Information*. American Economic Review, Vol (71), pp 395-410
- Vennet R, O. Jonghe & L. Baele (2004). *Bank Risk and the business Cycle*. University of Ghent, working paper No. 04/264.
- Voordeckers, W & Steijvers, T. (2006). *Business Collateral and Personal Commitments in SME Lending*. Journal of Banking and Finance, 30, pp 3067-3086.