RELATIONSHIP BETWEEN INTEREST RATE SPREAD AND FINANCIAL PERFORMANCE OF THE COMMERCIAL BANKS IN KENYA

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DECLARATION

This Research Project is my original work and has not been presented for conferment of degree in any University..

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DEDICATION

I dedicate this research work to my wife, for I have no language to say thank you for your encouragement, understanding and endless love throughout the duration of my studies.

ABSTRACT

The research aims at contributing to the growing number of studies on banking performance by attempting to introduce the interest rate spread as one of the factor behind financial performance in the banks .

Interest rate spread is defined by market microstructure characteristics of the banking sector and the policy environment. Risk-averse banks operate with a smaller spread than risk-neutral banks since risk aversion raises the bank's optimal interest rate and reduces the amount of credit supplied. Widening interest rate spread in Kenya has been widening following interest rate liberalization characterized by high implicit costs with tight monetary policy achieved through increased reserve and cash ratios and declining non-performing loans. This study sought to establish the relationship between interest rate spread and financial performance of the commercial banks in Kenya.

This study adopted a descriptive research design on a sample of quoted commercial banks in Kenya. The study used secondary data, collected from Bank Supervision Report. The study used quantitative techniques in data analysis to the relationship between the interest rate spread and performance of commercial banks. The data is presented using tables.

The findings of the research concludes that interest rate spread affect the performance of commercial banks, as it increases the cost of loans charged on the borrowers, regulations on interest rates have far reaching effects on performance of commercial since they determine the interest rate spread in banks and also help mitigate moral hazards incidental to performance of commercial banks, credit risk management technique remotely affects the value of a bank's interest rates spread as interest rates are benchmarked against the associated non-performing loans and non-performing loans is attributable to high cost of loans.

The study recommends that commercial banks in Kenya should assess their clients and charge interest rates accordingly as ineffective interest rate policy can increase the level of interest rates and consequently performance of commercial banks, apply stringent regulations on interest rates charged by banks so as to regulate their interest rate spread and enhance periodic/regular credit risk monitoring of their loan portfolios to reduce the level of Loans performance.

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ACRONYMS AND ABREVIATIONS.

ANOVA   - Analysis of Variance

BIS   -Bank interest spread

BDD   -Bad and doubtful debts

CAMEL   - Capital adequacy, Asset quality, Management, Earnings and Liquidity.

CBK   - Central Bank of Kenya

EAGLES   - Earning ability, Asset quality, Growth, Liquidity, Equity and Strategy

EVA   -Economic Value Added

GAAP   -generally accepted accounting principles

IRS   -Interest Rate Spread

KBA   - Kenya Bankers Association

KIPPRA   -Kenya Institute for Public Policy Research and Analysis

NOPAT   -Net operating profit after taxes

NPA   -Non Performing Asset

ROA   -Return on Assets

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

During the last two decades the banking sector has experienced worldwide major transformations in its operating environment. Both external and domestic factors have affected its structure and performance. Despite the increased trend toward bank disintermediation observed in many countries, the role of banks remains central in financing economic activity in general and different segments of the market in particular. A sound and profitable banking sector is better able to withstand negative shocks and contribute to the stability of the financial system. Therefore, the determinants of bank performance have attracted the interest of academic research as well as of bank management, financial markets and bank supervisors. (Tobin,1982).

This thesis aims at contributing to the growing number of studies on banking profits performance, by attempting to introduce the interest rate spread as one of the factors influencing performance by changes, while playing a part in the alteration of the intermediary role of banks. The interest rate spread, which is influenced by many factors, is the source of profits when banks perform their traditional intermediary role.

It is widely believed that fluctuations of market interest rates spread exert significant influence the performance of commercial banks. Earlier treatment of the issue provided by Samuelson (2005) indicates that under general conditions, bank profits increase with

rising interest rates. "The banking system as a whole is immeasurably helped rather than hindered by an increase in interest rates" (Samuelson, 2005). A more accurate measurement of how fluctuations in market interest rates affect banking firms largely depends on the sensitivity of banks' assets and liabilities (interest rates and volume) toward variations in open market rates.

Later investigation by (Hancock, 2005), confirms Samuelson's conjecture that a higher level of market interest rates improves banking profitability. In addition, the effect of interest rate spread changes on banks' profitability is shown to be asymmetric with the effect originating from lending rates being greater than those of deposit rates. The stochastic behavior of market rates is also argued to be a significant factor that determines the mode banks adopt in delivering their services. (Desmukh, 2003), show that banks can be either brokers or asset transformers subject to interest rate uncertainty.

The impulse response functions show that low and lagged response of lending rates contribute to the decline in banking spread following an increase in money market rates, thus, adversely affecting banking activities. Contrary to the above-mentioned findings, in Malaysia the high level of interest rates hindered banks' profitability. Further, we also provide evidence of a dichotomy banks' asset and liability rates consistent with (Slovin and Sushka, 2003). Causations between asset and liability rates are not supported for both directions.

Using the virtual prices concept, (Kimutai, 2003), asserted that savings are encouraged by high real rates of interest. (Slovin & Sushka, 1983), found a causal relationship between interest rates, money and investment/income. The results of (Huang's,2004), Co integration test indicated an existing long-run relationship between money demand, real income, price and real interest rates; and it is argued that the existence of a long-run stable relationship between financial variables and economic activities enables to improve the effectiveness of monetary policy.

1.1.1 Interest Rate Spread

A bank's interest rate spread is the difference between its lending rate and deposit rate. This spread affects the so called banker's mark-up, which is the difference between interest revenue on assets and interest expense on liabilities as a ratio of average bank assets. It can also be defined as the interest rate charged by banks on loans to prime customers minus the interest rate paid by commercial or similar banks for demand, time, or savings deposits. Trade economics journal (2008).

As credit institutions face downward sloping demand functions with respect to their lending rate, they exercise some monopoly power in loan markets. Empirical studies have underpinned the prevalence of such imperfect loan markets, where banks are lending rate setters (Kilongosi, 2005). When facing competition in the loan market, banks are confronted by a trade-off between securing their market share in the short-run and safeguarding their long-run survival. According to (Kilonzo, 2003), an intensifying

competition drives current profits down, leading to more relaxed lending conditions and higher risk exposure. Thus, tough competition can also undermine prudent banking and necessitates regulation.

When it comes to the effect of a change in interest rate spread on banking performance, it is logical to expect a positive influence of a shrinking spread and a negative effect of a growing spread. As banks reduce their spread in face of growing competition or a changing discount rate, borrowing becomes less expensive while return on deposits rise, and hence lending and output will rise. Moreover, when interest rate spread decreases due to competition, banks shift funds from the central bank (non-interest bearing deposits) to the loan market in order to increase banker's mark-up (Ramakrishnan, Ram & Anjan Thakor,1984). A shrinking interest rate spread makes the traditional intermediary role of banks less lucrative, thus one can also expect it to induce credit institutions to engage in other activities besides lending in order to reap the benefits of economies of scope.

1.1.2 Financial performance measurement

Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. This term is used as a general measure of firm's overall financial health over a given period, and can be used to compare similar firms across the industry or to compare industries or sectors in aggregation. There are many different ways to measure financial performance but all measures should be taken into aggregation. Line items such as revenue from operations, operating income or cash

flow from operations can be used, as well as total unit sales. Furthermore, the analyst or investors may wish to look deeper into financial statements and seek out margin growth rate or any declining debt (White head & Gup, 1985).

Performance is the outcome of all of the organization's operations and strategies (Wheelen and Hunger, 2002). Measuring financial performance accurately is critical for accounting purposes and remains a central concern for most organizations. Performance measurement systems provide the foundation to develop strategic plans, assess an organization's completion of objectives, and remunerate managers (Lttner &Larcker, 1998). Although assessment of performance in the marketing literature is still very important, it is also complicated (Pont & Shaw, 2003). While consensual measurement of performance promotes scholarly investigations and clarify managerial decisions, marketers have not been able to find clear, current and reliable measures of performance on which marketing merit could be judged.

1.1.3 Commercial Banks in Kenya

A commercial bank is a type of a financial intermediary. Commercial banking is also referred to as business banking. It is a bank that provides current accounts, savings accounts, and money market accounts and that accepts time deposits. Commercial banking also refers to a bank or a division in a bank that primarily deals with deposits and loans from corporations or large businesses. Commercial banking can also be viewed as distinct from retail banking, which involves providing financial services directly to

consumers. Many banks are involved in both commercial and retail banking services (CBK, 2008).

There are forty three banks as categorized by Central Bank and members of the clearing house. Thirty-five of these banks, most of which are small to medium sized, are locally owned. The industry is majorly dominated by a few large banks which are foreign-owned, though some are partially locally owned. There are ten banks listed on the Nairobi Securities Exchange. The banks came together under the Kenya Bankers Association (KBA), which serves as the lobby for banks' interests and addresses the issues affecting member institutions (Kenya Bankers Association annual Report, 2008).

Banks represent a significant and influential sector of business worldwide that plays a crucial role in the global economy. Commercial banks are financial intermediaries that serve as financial resource mobilization points in the global economy. They channel funds needed by business and household sectors from surplus spending to deficit spending units in the economy (Madura and Zarruk, 1995). A well developed efficient banking sector is an important prerequisite for saving and investment decisions needed for rapid economic growth. A well functioning banking sector provides a system by which a country's most profitable and efficient projects are systematically and continuously funded. The role of banks in an economy is paramount because they execute monetary policy and provide means for facilitating payment for goods and services in the domestic and international trade.

1.2 Problem Statement

Interest rate determines the profitability of a commercial bank among other factors. High interest rates have remained a macroeconomic problem that has been hard to eliminate. Economic observers and academicians in Kenya have pointed out that high interest rates are regressive to the economic development of the country. The central bank has attempted to correct the situation but the policy definition and design has not been appropriately designed.

In Kenya interest rates were liberalized in July 1991. Financial repression theory predicts that after liberalization positive real interest rates should be realized as nominal interest rates increase from the government set low levels when price stability is achieved. The financial system also gains efficiency in the intermediation process such that the interest rate spread between the lending and deposit rate narrows. In Kenya, however, nominal interest rates increased minimally immediately after liberalization, and as inflation accelerated very high negative real rates were recorded. Interest rate spread widened, indicating either inefficiency in the intermediation process with weak institutional infrastructure, and/or macroeconomic instability, and/or a non-competitive structure in the banking sector. Deposit rates remained at low and almost constant levels, while lending rates began moving upwards. Lack of diversity in financial institutions and assets creating an uncompetitive financial market. For example, the stock market was still in its infancy, there were constraints on individual investors competing for government

securities with a strictly set minimum investment capital level. (KIPPRA, Discussion Papers 2011).

While quite a number of studies have investigated the effect of interest rate spread, most of these studies have been done in developed countries with few being done in developing countries. In Kenya, (Ngugi, 2001) conducting a study on interest rate spread in Kenya found that commercial banks incorporate charges on intermediation services offered under uncertainty, and set the interest rate levels for deposits and loans.

Deposit lending rate spreads are closely related to the banking sector's ability to channel savings into productive uses. This study, therefore will represent a departure from other studies done on interest rate spreads. For example (Ndung'u and Ngugi, 2001) examined the causes of high interest rate spreads in Kenya. The purpose of this paper was to address part of this gap by examining interest rate spreads in all quoted commercial banks in Kenya.

1.3 Objective of the Study

The main objective of the study is to investigate the relationship between interest rate spread and performance of the commercial banks in Kenya.

1.4 Value of the study

It would be significant to the banking industry, especially to decision makers involved in implementation of interest rates for their banks. The government can also use this research for comparative purposes e.g. government policy makers, since an understanding of the behavior of interest rate spread on performance will enable them come up with appropriate policies that encourage market growth.

The Findings of this study will provide information and advice on the possible opportunities that research institutions can use and impact of interest rates and knowledge of performance for the development of the upcoming commercial banks. The study would be of value to researchers as a basis for future empirical and conceptual research, which would be helpful in refining and validating findings especially when a significant number of experiences is collected and studied.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The purpose of this paper is to study the link between, on one hand the interest margin of the bank, and the determinants of the interest margin on the other. The basic importance of bank interest margin or spread (BIS), arises from the fact that it presents an indicator of a bank's profitability as well as the cost of financial intermediation imposed on both depositors and debtors.

2.2. Interest Rate Theories

2.2.1 The segmented market theory

This theory of the term structure assumes that credit markets are segmented, separated and distinct. Therefore the interest rate on each bond with a different maturity is determined by the supply of and demand for that bond, with no effects from expected returns on other bonds with other maturities (Mishkin, 1998).

This theory holds that investors have specific investment preferences that are ultimately dictated by the nature of their liabilities (Howells and Bain, 1998). A key assumption of the segmented market theory is that bonds of different maturities are not substitutes. Some lenders or borrowers prefer short-term bonds, while others prefer long-term ones. Investors and borrowers are concerned with specific maturities only. Interest rates are determined independently in separate markets with different maturities, without affecting

other segments of the credit market. Investors or bond issuers only care about one segment of the bond market.

This theory explains why yield curves are usually upward-sloping, and states that investors are risk-averse, so they prefer the safety of short-term bonds. Long-term bonds will have higher yields as a result of their lower demand since investors prefer short-term bonds. It does not, not however, explain why interest rates tend to move together over time, and it also does not offer any insights into why yield curves slope upward when interest rates are very low and slope downward when interest rates are very high.

2.2.2 The Liquidity Premium Theory

Since each of the above two theories explain empirical facts that the other cannot, a logical step is to combine them, which leads to the liquidity premium theory. This theory of the term structure states that the interest rate on a long-term bond will equal an average of short-term interest rates expected to occur over the life of the long-term bond, plus a premium that responds to supply and demand conditions for that bond (Mishkin, 1999). The liquidity premium theory modifies the expectations hypothesis by assuming that investors are risk averse; therefore they will demand a premium for long-term bonds because of interest rate risk. It is assumed that investors require a liquidity premium to induce them to lock up their funds for longer-term maturity (Howells and Bain, 2002). That is, investors must be paid an extra return in the form of an interest rate premium to encourage them to invest in long-term securities and compensate them for the increased

risk (Van , Botha and Skeritt, 2003). The liquidity premium theory's main assumption is that bonds of different maturities are substitutes, but not perfect substitutes, which means that the expected return on one bond does influence the expected return on a bond of a different maturity. Liquidity premium theory also allows investors to prefer one bond maturity over another. Investors tend to prefer shorter-term bonds because these bonds bear less interest-rate risk. As such, if the investors were to hold bonds of longer maturities they must be offered a liquidity premium to induce them to do so.

2.3 The Concept of the Performance in a bank.

Financial Institution like any other organization is based on input and output. Measuring output and performance in the banking sector is not as straightforward as in other industries due to the intangible nature of the products. For instance, some working papers classify deposits as inputs while others as output. Deposits should be classified as input on the basis of the plain notion that deposits are used to make loans, and the interest rate paid on deposits is the price of that input. However, some working papers claim that deposit accounts are intrinsically different type of services provided by the bank to the households and individuals, such as safe keeping, and a smooth payment system, and hence could also be categorized as output (Elkayam, 1996).

When considering the services produced, one has to keep in mind that some services are free of charge, which banks offer as complements to their deposit and loan products.

Thus, output measurements will be biased as some services are left out due to their non-price characteristics. (Kashyap, 2000).

The banking sector constitutes a predominant component of the financial services industry. The performance of any economy to a large extent is dependent on the performance of the banking sector. The banking sector's performance is seen as the replica of economic activities of the nation as a healthy banking system acts as the bedrock of social, economic and industrial growth of a nation. Banking institutions in our country have been assigned a significant role in financing the process of planned economic growth.(Bodla, 2006).

2.3.1 The production or value-added approach

The production approach measures output as the number of deposit and loan accounts, or as the number of transactions per account. It assumes that a bank's total costs are equal to the operating expenses for employing capital and labour in the production of loan and deposit accounts (Ho and Saunders, 1981), Output is treated as a flow; however, the measurement fails to capture the quality of services provided, and omits the production of information (Mishkin,1998).

2.3.2 The intermediation approach

The intermediation approach, or as it is sometimes called the "asset approach", identifies intermediation as the core activity in banking, implying that banks are not producers of

de-posit and loan services (Paroush, ,1994). Banks are providers of intermediation services, and this is achieved mainly through the production of assets. The provision of deposit ac-counts is considered to be production of intermediate goods, which are provided to depositors as payments in kind for the funds they lend to the bank (Humphrey, 1991). Out-put is measured by the value of bank assets, while deposits are treated as financial inputs (Elkayam, , 1996). Total costs are equal to operating costs plus interest costs. The intermediation approach is the most frequently recurring method applied in research papers for measuring banking output (Heffernan, 1996).

2.3.3 Economic Value Added (EVA)

Economic Value Added, or EVA1, is a tool that bankers can use to measure the financial performance of their bank. EVA is the invention of Stern Stewart & Co in 1989 and is a global consulting firm. EVA is calculated as a company's "net operating profit after taxes (NOPAT) minus a cost for the equity capital employed by the equity capital employed by the company. The cost of equity capital employed by a company is equal to the company's equity capital (reported on its balance sheet) multiplied by a percentage return that the company's shareholders require on their investment. Expressed as a formula:

EVA = "Net Operating Profit After Taxes" – (Equity Capital x % Cost of Equity Capital) (Gregory Fraker ,2006).

It has been proofed that EVA, can be an important tool that bankers can use to measure and improve the financial performance of their bank. Since EVA takes the interest of the bank's shareholders into consideration.(Gregory, 2006).

2.3.4 CAMEL

CAMEL rating system, is a device created by federal banking regulators to assess the overall performance of commercial banks (Rose, 2010). The CAMEL acronym stands for Capital adequacy, Asset quality, Management, Earnings and Liquidity.

Capital adequacy is a reflection of the inner strength of a bank, which would stand it in good stead during the times of crisis. Capital adequacy may have a bearing on the overall performance of a bank, like opening of new branches, fresh lending in high risk but profitable areas, manpower recruitment and diversification of business through subsidiaries or through specially designated branches, (Shankar, 1997).

Asset quality is another important aspect of the evaluation of a bank's performance under the reserve guidelines as required by the regulator of a bank are to be disclosed in a classified manner as, Standard, Sub-Standard and Doubtful and loss asset. Standard assets are those assets that are performing and loaned is paying interest and instalment at due date, further they do not carry more than normal risk. Sub-standard assets are those assets that have been classified as non-performing for a period less than or equal to three quarters. In such cases, the current net worth of the borrower/guarantor or the current market value of the security charged is not enough to ensure recovery fully. Doubtful

assets are those assets that have remained substandard for 18 months. The provision of 100% is to be made by the realizable value of the security to which a bank has recourse.(Nazir 2010).

The performance of Management capacity is usually qualitative and can be understood through the subjective evaluation of Management systems, organization culture, control mechanisms and so on. However, the capacity of the management of a bank can also be gauged with the help of certain ratios of off-site evaluation of a bank. The capability of the management to deploy its resources, aggressively to maximize the income, utilize the facilities in the bank productively and reduce costs. (Purohit, 2003).

The 'Earnings/Profit' is a Conventional Parameter of measuring financial performance. Higher income generally reflects a lack of financial difficulties and so would be expected to reduce the likelihood of failure of a bank (Cole & Gunther, 1996).

a) The ability of a bank to provide liquidity requires the existence of a highly liquid and readily transferable stock of financial assets. Liquidity and transferability are the key ingredients for such transactions. The liquidity requirement means that financial assets must be available to owners on short notice (a day or less) at par. The transferability requirement means that ownership rights in financial assets must be portable, at par, to other economic agents, and in a form acceptable to the other party (Sinkey, & Joseph 1998).

b) Liquid assets such as investment securities, enable a bank to respond quickly to unexpected demands for cash and typically reflect relatively conservative financial strategies. Thus liquidity management is one of the most important functions of a bank. If funds tapped are not properly utilized, the institution should suffer loss. Idle cash balance in hand has no yield. On the other hand if the bank does not keep balanced liquid cash in hand, it cannot be able to pay the demand withdrawal of depositors, as well as, instalment of creditors and ultimately payment for other contingent liabilities. These will lead overtrading position to the institution and create problems to borrow funds at high rate. So proper balanced liquidity should be maintained by avoiding inadequate cash position, or excess cash position (Panigrahi, 1996).

2.3.5 EAGLES

The EAGLES is able to measure and compare banks performance in a more determinate objective and consistent manner. The name is derived from the key success factors confronting banks today, i.e. Earning ability, Asset quality, Growth, Liquidity, Equity and Strategy. This approach has been pioneered by the writer and has gained creditability among the banking industry and fund management. It was used in predicting the Asian financial crisis in the 1980s when the writer was "banned" from data collection in many countries. (Bankers Journal Malaysia, 2009).

Earning ability is shown by three noteworthy indicators – Return on Assets (ROA), Return on Shareholders' Fund (ROSF) and Income/Overheads ratio (IOR). The importance of the IOR is usually not well understood. The main point lies in that Income depends on external market forces, while Overheads is highly influenced by internal staffing. So the bank must know how to adjust the staffing according to market demand for its products and services. (Bankers Journal Malaysia, 2009).

Asset quality is best assessed by on-site inspection of the bank's loan portfolio. If this is not possible, the asset quality can be measured by the level of bad debt provisions, that is, bad and doubtful debts (BDD) as a percentage of total loans. A conservative approach will dictate that the quantum of provision to err on the high side rather low. (Bankers Journal Malaysia, 2009).

Growth rates of loans and core deposits are the most important indicators of a how a bank wants to position itself in the marketplace. A high growth loan book without a corresponding growth in deposit base signifies an intention to increase interest margins. A higher deposit growth without a corresponding growth in loans means that the bank suffers from low interest margins. For some banks lower interest margins could hamper overall profitability. (Bankers Journal Malaysia, 2009).

Liquidity can be described as the ability of a bank to have sufficient funds to meet cash demands for loans deposit withdrawals and operating expenses. For this reason, a balance

should be found between the amount of deposits garnered and the quantum of loans extended. The indicator is the deposit-to-loan ratio. (Bankers Journal Malaysia, 2009).

Equity level and capital adequacy have profound impact upon the bank. Not only is there an international guideline (Basle II) that stipulates a bank must have a minimum capital equivalent to 8% of risk adjusted asset. Many banks are restricted to open additional branches unless they meet minimum capital requirements. (Bankers Journal Malaysia, 2009).

The effective management of a bank strategy is indicated by the strategic response quotient (SRQ). It is an intriguing ratio because it assesses management's ability to lend, to garner deposits, obtain fee-based income and to manage the operating cost. As to what is an appropriate balance of the three core banking activities will depend on the bank's strategy. The SRQ is obtained by dividing the interest margin by net operating cost. The higher figure the better combined with excellent risk controls.(Bankers Journal Malaysia, 2009).

2.4 Historical Development of Interest rates

In historical times credit preceded the coining of money over the two thousand years. In prehistoric times even before development of common measures of value or medium of exchange credit existed Loan of a seed to a son or brother until harvest time, or loan of an animal or food. Such transfers were called gifts if no repayment was expected. These transactions in kind required no money, no exchange nor barter. Loans without interest

were common as it is today. Loans of land or loans secured by land are forms of credit that were developed before historical times. Here the interest was the first fruits of the land. (Mugendi,2000).

The first recorded example is found in the Assyrian trade colonies in central Asia Minor, in Cappadocia. The trade colony of Kanesh dates at least from the twentieth century BC, and may have been established earlier by the Sargonids from Akkad or by other southern Mesopotamians. Like the Dark Age Greeks, the archaic Anatolians probably had little reason to develop any kinds of debt except for the omnipresent wergild type obligations. But their commerce with Mesopotamia exposed them to the ideas of commercial debt and above all to the idea of paying interest. Also introduced were various aspects of originally Mesopotamian religion, myth and ritual, along with modes of social organization such as contractual legal forms and oaths, weights and measures, and the use of weighed pieces of silver as the cosmopolitan Middle Bronze Age "money of the world." (Clason, 1926).

2.5 Interest rates

Interest is the rent paid to borrow money. The lender receives a compensation for foregoing other uses of their funds, including (for example) deferring their own consumption. The original amount lent is called the principal, and the percentage of the principal which is paid/payable over a period of time is the interest rate, (Thygersa, 2005).

According to (Saunders, 2009), an interest rate is a price, and like any other price, it relates to a transaction or the transfer of a good or service between a buyer and a seller. Interest will be used in this study to relate to additional money received as payment for a loan that is calculated as a fraction of the amount borrowed and is used to make a profit from the transaction.

2.6 Factors Influencing Interest Rate spread.

2.6.1 Market Structure

The organization management, the government, the owners of the organization and the regulatory framework define the market structure. (Njuguna and Rose, 2000).

2.6.2 Legal and regulatory frame work

The regulatory framework incorporates regulations by the monetary authority aimed at achieving financial stability. Thus, regulatory should aim to achieve financial stability by creating a strong regulatory framework. Financial instability with unsound and improperly supervised lending practices may result in high real loan rates and a widening spread because of an information asymmetry problem. With adequate supervision an increase in interest rate results in banks rationing out credit instead of taking on new borrowers. (Njuguna and Rose, 2000).

2.6.3 Taxation

Reserve and liquidity requirements and mandatory investment and interest controls are categorized as implicit taxes. A reserve requirement with no interest payment tends to have a high opportunity cost as it squeezes the excess reserve available for banks to advance credit, reducing the scope of the banks' income-earning assets. Similarly, mandatory investment implies inefficient allocation of resources where banks continue giving funds to prioritized sectors despite a non-optimal rate of return, while interest rate controls limit the banks' efforts to capture high-yielding investments. (Njuguna and Rose, 2000).

2.6.4 Macroeconomic Environment

It increases uncertainty and adversely impacts on the credit worthiness of the borrower, thus increasing the risk premium charged by banks on lending rates. This disrupts the supply of credit as demand declines, increasing the interest rate spread. Inflation, for example, is associated with a high interest margin as it creates uncertainty and therefore raises the risk premium charged. (Njuguna and Rose,2000).

2.7 Commercial Banking and Market Interest Rates

Commercial banks' activities greatly rely on their intermediation services, filling the gap between suppliers and demanders of funds. Their profitability is partly due to the difference in interest rates charged on loans and what is paid to suppliers of funds, i.e., the interest rate spread. The larger the spread between loan and deposit rates, the more

likely the necessary condition for intermediation to occur can be met. Earlier explanations that allow positive spread to be maintained rest on the ability of commercial banks to minimize transaction costs in loans originating through their intermediation services.

(Benston and Smith, 1976), suggest that transaction costs are central to the theory of financial intermediation and the ability of the financial intermediary to exploit the returns to scale implicit in the structure of the transaction costs by purchasing large blocks of securities, repackaging, and reselling them at a lower cost supports the existence of intermediaries. Based on the transaction cost explanation, positive spread is consistent with banks' profitability since banks largely play the brokerage role intermediating between depositors and lenders.

The behavior of interest rate spread is critical in analyzing this issue. Theoretically,(Ho and Saunders, 2001), indicate that maintaining a positive spread is crucial for banking firms as this will compensate them for taking the risk of providing immediacy of loans and deposits, that are viewed as stochastic, which arrive at different times. Their empirical estimate shows that the magnitude of 'pure spread' is significantly affected by interest rate volatility. In a related study, (Slovin and Sushka, 2003), modeled commercial loan rates as independent from deposit rates. This dichotomy of asset and liability rates is achieved as lending rates are shown to be sensitive to open market rates while deposit rates are not.

2.7.1 Interest rate spread in Kenya

Despite the widespread implementation of costly financial sector reform programmes in the developing world, banking sectors in many developing countries are still characterized by persistently high interest rate spreads. Studies by (Flannery,1981), (Leland and Pyle1977), and (Kilongosi, 2005), all show that interest rate spreads in Sub-Saharan Africa, Latin America and the Caribbean are wider than in developed countries. This is indicative of inefficiency in the banking sectors of developing countries, as it is now widely acknowledged that interest rate spreads are an adequate measure of bank intermediation efficiency (Pyle,1971).

The study aims to explain the factors determining interest rate spread for Kenya's banking sector. For the pre-liberalization period, the minimum and maximum ceilings on deposit and lending rates set a maximum interest rate spread. Variations in the spread reflect monetary and fiscal policy actions, where expansionary fiscal policy partly increased inflationary pressure and the monetary authority responded by tightening the monetary policy and revising interest rates upwards. During the post-liberalization period, we expect the spread to narrow to reflect efficiency gains and reduced transaction costs with the removal of distortionary policies and strengthening of the institutional set up. (Mwingi,2002).

The results revealed that the interest rate spread increased after independence because of yet-to-be gained efficiency and high intermediation costs. The increase also stemmed from the failure to meet the prerequisites for successful financial reforms and the lag in adopting indirect monetary policy tools and reforming the legal system.

2.7.2 Interest rate spread measurement

Ideally, Interest Spread rate is measured as the difference between the average interest rate earned on loans and the average interest rate paid on deposits for individual commercial banks. However, due to the unavailability of such bank-level data on interest rates in many developing countries, and in order to better understand the broad state of efficiency of financial intermediation in an economy, banking sector spreads are instead examined. This is done by using the average commercial bank lending and deposit rates provided for low and middle-income countries. The banking sector interest rate spreads (IRS) are therefore calculated as:

IRS = Average Commercial Bank Lending Rate – Average Commercial Bank Deposit Rate (Abiodun and David ,2008).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology section describes the methods and procedures that were used to carry out the study. This is an important section, which has direct influence on the findings of the study. Hence, the methodology that were used should be described very clearly so that another researcher can follow the procedures used to reach similar conclusions without difficulty. This chapter covers the overall methodology used in the study; the research design, population and sample, data collection methods and research procedures are detailed.

3.2 Research Design

This adopted a descriptive study. According to (Mugenda and Mugenda, (1999), the purpose of descriptive research design is to describe the state of affairs as it is at present. It provides data about the population being studied; it is used when the objective is to provide a systematic description that is as factual and accurate as possible. It provides the frequency of occurrence hence lending itself to statistical calculations such as determining the average number of occurrences or the central tendency. The descriptive research designs were enable the researcher to find out the relationship between variables of interest.

3.3 Population

A population is the total collection of elements from which the researcher wishes to make some inference (Donald, 2000). The population of this research was all commercial banks in Kenya.

3.4 Data Collection

This study was facilitated by the use of secondary data. Interest rate data was extracted from published reports of all commercial banks from CBK Library. I used a friend to obtain for me the data from the reports of the CBK.

3.5 Data Analysis and Presentation

The analysis was both qualitative and quantitative. Quantitative analysis was carried out using descriptive statistics such as mean, mode, median, standard deviation and frequency. Qualitative data will be analyzed using content, by categorizing the main themes or patterns of information. This will then be presented using graphs, pie charts and tables and a final report was compiled for presentation containing the recommendations and conclusions of the study. I will use regression method in analysis the data. The regression equation $(Y = \beta_0 + \beta_i X_i + \beta_{ii} X_{ii} + e)$

Whereby   Y = Financial Performance

β_0 = Constant

X_i = deposits

X_{ii} = loans

e = Error Term

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION.

4.1 Introduction

This chapter presents the information processed from the data collected during the study to investigate the relationship between interest rate spread and performance of the commercial banks in Kenya. Revenue from operations and performing debts was used to measure performance of the firm. Furthermore, the analyst or investors may wish to look deeper into financial statements and seek out margin growth rate or any declining debt.

4.2 Trend Analysis of Profitability

The table below reports the mean scores of ROA from 2004 to 2010. The mean of score of ROA for the whole sector was 1.4% and rose to 2.4% in 2008 showing an increase of 71.4%. For large banks ROA was 1.5% in 2002 and rose to 4% showing an increase of 166.7%. ROA for small and medium was 1.4% in 2004 and rose to 1.8% by only 28%.

Table 4. 1: Decomposition of Interest Spreads Over Time

AS	2004	2005	2006	2007	2008	2009	2010
Average Lending Rate	25.03	24.47	25.89	24.64	21.45	22.75	12.22
Average Deposit Rate	5.79	4.62	3.53	2.00	1.36	2.60	2.57
Spread	19.25	19.85	22.36	22.64	20.10	20.16	9.78
Overhead Costs	6.94	6.49	7.53	6.60	5.83	5.99	3.10
Loan-loss Provisions	4.28	2.66	3.43	2.68	2.02	1.68	1.64
Reserve Requirement	0.64	0.51	0.39	0.22	0.15	0.29	0.29
Taxes	2.21	3.05	3.30	3.94	3.63	3.66	1.39
Profit Margin	5.16	7.12	7.71	9.20	8.47	8.54	3.85

(Source: CBK 2011)**.**

On how interest spreads, the proxy for the efficiency of financial intermediation, have evolved over the past ten years in Kenya, and relate those developments to our discussion of the government strategy for the development of the financial sector and the accompanying changes in the legal and regulatory framework discussed above. The study then presents simple arithmetic decompositions of the interest spreads to explain the factors that have contributes to their relatively high levels and also to their decline over time. We also examine how spread levels and their determinants differ by bank size and ownership type. Finally, we offer regressions that better enable us to test whether the determinants of spreads differ by bank ownership type and if such differences can be explained by the types of activities that different owners pursue.

Headline indicators produced by the Central Bank of Kenya indicate that spreads declined from 2004 to 2011 and have since remained stable. The relatively sharp decline in spreads in 2011 owes much to improvements in Kenya's fiscal situation and general macro-management, which led to substantial declines in both the volume of government securities issued and the interest rates paid. As government securities became a less attractive investment option for banks, they turned to new lending opportunities, and the competition between banks for those opportunities coincided with lower spreads. However, the shift out of government securities was much swifter for some banks than others, and most banks increased their holdings of those securities from 2004 to 2005. In addition, yearly average spreads in Figure 1 mask wide variation across banks and our statistical analysis below indicates that the drivers of changes in spreads differ across

bank ownership types. For these reasons, the reduction in government debt issuance does not provide a complete explanation of the evolution of spreads over this period.

Table 4. 2: Profitability means scores (2004-2010) ROA

Category	2004	2005	2006	2007	2008	2009	2010
Sector(%)	1.4	1.5	1.3	1.7	2.2	2.8	2.4
Large banks	1.5	2.5	2.3	2.9	3.6	3.8	4
Small banks	1.4	1.1	.8	1.2	1.6	2.4	1.8

(Source: CBK 2011)

The reported results in Table 4.1 mean that the profitability of the sector increased from 2004 to 2010. In the banking industry, ROA of more than 1.5% indicates good performance (Flamini et al, 2009). Therefore this means the performance of the sector was comparable to international standards. This is very important for the development of this country as banks play a very important role of financial intermediation. However analysis by bank size indicates that, large banks enjoyed more profit increase than small and medium banks during this period. From 2004 to 2010 the average profitability of the large banks increased by 166.8%, while for small and medium banks increased by only 28.6%. This lends support to the argument that the local banking market is largely dominated by larger banks.

4.3 Relationship between profitability and interest spread.

4.3.1 Regression Analysis for all banks.

The study further performed a linear regression analysis on the interest rate spread and ROA for all banks to establish the correlation and relationship among them. The linear regression equation was of the form:

$$Y = \beta_0 + \beta_1 X + \varepsilon$$

Where, β_0 and $\beta 1$ are constants with β_0 being the intercept and β_1 being the coefficient of X, Y = the profit for the sector in percentage (ROA) and X = interest rate spread (IRS).

Table 4. 3: Model Summary for all Banks (2004-2010).

Model		R	R Square	Adjusted R Square	Std. Error of the Estimate
Dimension	1	.215a	0.046	0.145	0.61152

    a.   Predictors:(Constant), interest spread

According to the model summary presented in table above, the correlation between interest rate spread and ROA ratio was 0.215; this points to a positive weak relationship between the two. This is also shown by the coefficient of determination depicted from R-square value whose value was 0.046.

Table 4. 4: Analysis of Variance (ANOVA) (2004-2010 profit sector).

Model		Sum of squares	Df	Mean square	F
1	Regression	.09	1	.09	.241
	Residual	1.87	5	.374	
	Total	1.96	6		

Predictors: (Constant), Interest Spread

A. Dependant Variable: Profit Sector.

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From ANOVA statistics, regressing ROA against interest rate spread gives a less significant model in prediction given an F-significance value of 0.241. That is, the regression model can be 24.1% wrong in its prediction.

Table 4. 5: Coefficients

Model		Unstandardized		Standardized	
		B	Std	Beta	t
1	Constant	2.77	1.786		1.551
	Interest	.062	.126	.215	.491

A. Dependant Variable: Profit Sector

Based on the regression analysis, the study obtained the following linear regression model; **ROA = 2.77 + 0.062 IRS + ε.**

From the regression model above, taking IRS at zero, the value of ROA ratio would be 2.77. The model also shows that a unitary increase in the level of interest rate spread leads to a 0.062 increase in the level of ROA.

4.3.2 Regression Analysis for Large Banks.

The study further performed a linear regression analysis on the interest rate spread and ROA for large banks to establish the correlation and relationship among them. The linear regression equation was of the form: $Y = \beta_0 + \beta_1 X + \varepsilon$

Where, β_0 and $\beta 1$ are constants with β_0 being the intercept and β_1 being the coefficient of X,Y = the profit Ratio in percentage (ROA) and X = interest rate spread (IRS).

Table 4. 6: Model Summary and Analysis of Variance

Model		R	R Square	Adjusted R Square	Std Error of estimate
Dimension	1	.525a	.276	.131	.84911

a. Predictors: (Constant), interest spread

According to the model summary presented in the table above, the correlation between interest rate spread and ROA ratio was 0.525; this points to a positive weak relationship between the two. This is also shown by the coefficient of determination depicted from R-square value whose value was 0.276.

Table 4. 7: Analysis of Variance (ANOVA large banks).

Model		Sum of Squares	Df	Mean Square	F
1	Regression	1.372	1	1.372	1.903
	Residual	3.605	5	0.721	
	Total	4.977	6		

a. Predictors: (Constant), Interest Spread

b. Dependent Variable: Large Banks

From ANOVA statistics, regressing ROA against interest rate spread gives a less significant model in prediction given an F-significance value of 1.903. That is, the regression model can be 19.03% wrong in its prediction.

Table 4. 8: Coefficients(a).

Model		Unstandardized		Standardized	
		B	Std Error	Beta	T
1	Constant	6.334	2.479		2.555
	Interest	.242	.175	.525	.138

a. Dependent Variable: Large Banks

Based on the regression analysis, the study obtained the following linear regression model; **ROA = 6.334 + 0.242 IRS + ε**

From the regression model above, taking IRS at zero, the value of ROA ratio would be 6.334. The model also shows that a unitary increase in the level of interest rate spread leads to a 0.242 increase in the level of ROA.

4.3.3 Regression Analysis for small and medium banks.

The study further performed a linear regression analysis on the interest rate spread of small and medium banks and ROA to establish the correlation and relationship among them. The linear regression equation was of the form: $Y = \beta_0 + \beta_1 X + \varepsilon$

Where, β_0 and $\beta1$ are constants with β_0 being the intercept and β_1 being the coefficient of X,Y = the profit Ratio in percentage (ROA) and X = interest rate spread (IRS).

Table 4. 9: Model Summary

Model		R	R Square	Adjusted R	Std Error of estimate
Dimension	1	.099a	0.01	-0.188	0.57239

    a. Predictors(Constant), Interest

According to the model summary presented in the table above, the correlation between interest rate spread and ROA ratio was 0.099; this points to a positive weak relationship between the two. This is also shown by the coefficient of determination depicted from R-square value whose value was 0.01.

Table 4. 10: Analysis of Variance (ANOVA) (ROA against interest rate 2004).

Model		Sum of Squares	Df	Mean Square	F
1	Regression	.016	1	0.016	0.049
	Residual	1.638	5	0.328	
	Total	1.654	6		

a. Predictors: (Constant), Interest spread

b.Dependent Variable: Small and medium

From ANOVA statistics, regressing ROA against interest rate spread gives a less significant model in prediction given an F-significance value of 0.049. That is, the regression model can be 4.9% wrong in its prediction.

Table 4. 11: Coefficients(a).

Model		Unstandardized		Standardized	
		B	Std	Beta	T
1	Constant	1.104	1.671		0.66
	Interest	0.026	0.118	0.099	0.22

b.Dependent Variable: Small and medium

Based on the regression analysis, the study obtained the following linear regression model; **ROA =** 1.104 **+** 0.026 **IRS + ε**

From the regression model above, taking IRS at zero, the value of ROA ratio would be 1.104. The model also shows that a unitary increase in the level of interest rate spread leads to a 0.026 increase in the level of ROA.

4.4 Summary of CBK Statistics

The prevailing margin between deposit-lending rates, the interest rate spreads (IRS) in an economy has important implications for the growth and development of such economy, as numerous authors suggest, a critical link between the efficiency of bank intermediation and economic growth. Quaden (2004), for example, argues that a more efficient banking system benefits the real economy by allowing 'higher expected returns for savers with a financial surplus, and lower borrowing costs for investing in new projects that need external finance.

To augment the findings of primary data sources and curb its limitations inherent in lack of respondents' objectivity (subjectivity), uncooperativeness and low response rate, the study collected secondary data from the CBK offices (banks supervision report 2004 to 2010) on NPLs and interest rate spread. The data was then presented in table below.

Table 4. 12: Performance of Commercial Banks and Interest Rate Spread Data from 2004 to 2010

Year	Gross Loans and	Gross Profitability and	Loans	Interest rate
2004	261418	35934	13.75	18.34
2005	315321	109898	34.85	13.47
2006	382290	111889	29.27	12.25
2007	417300	106500	25.52	13.16
2008	473100	100700	21.29	13.64
2009	533800	56800	10.64	13.32
2010	670372	61869	9.23	14.01
Maximum	**670372**	**111889**	**34.85**	**18.34**
Minimum	**417300**	**56800**	**9.23**	**12.25**

Source: CBK Statistics.

According to the table, the maximum aggregate loan advances for the study period approximated 670 billion while the minimum amount was 417 billion. The maximum gross loans were 112 billion while the minimum annual value was 57 billion. Figure 15 presents a trend line showing clearly the interaction between gross loan advanced by the commercial banks in Kenya and the consequent level of non-performing loans.

4.4.1 Regression Analysis on the interest rate spread and Performance

The study further performed a linear regression analysis on the interest rate spread and performance to establish the correlation and relationship among them. The linear regression equation was of the form: $Y = \beta_0 + \beta_1 X + \varepsilon$

Where, β_0 and $\beta 1$ are constants with β_0 being the intercept and β_1 being the coefficient of X, Y = the performance in percentage and   X = interest rate spread (IRS).

Table 4. 13: Model Summary and Analysis of Variance

R	R Square	Adjusted R	Std.Error of the	Durbin-	
0.382	0.1463	0.0396	9.6917	1.4372	
	Sum of Squares	Df	Mean Square	F	Sig.
Regression	128.76	1	128.76	1.371	0.275
Residual	751.43	8	93.929		
Total	880.19	9			

According to the model summary presented in table 13 above, the correlation between interest rate spread and profitability ratio was 0.382; this points to a positive weak relationship between the two. This is also shown by the coefficient of determination depicted from R-square value whose value was 0.1463.

From ANOVA statistics, regressing profitability against interest rate spread gives a less significant model in prediction given an F-significance value of 0.275. That is, the regression model can be 27.5% wrong in its prediction.

Table 4. 14: Regression Coefficients

	Unstandardized		Standardized		
	B	Std Error	Beta	t	Sig
Constant	9.601	12.831		0.748	0.476
Interest Rate Spread	0.898	0.767	0.382	1.171	0.275

Based on the regression analysis, the study obtained the following linear regression

model; **NPL = 9.601 + 0.898 IRS + ε**

From the regression model above, taking IRS at zero, the value of return on assets ratio

would be 9.601. The model also shows that a unitary increase in the level of interest rate

spread leads to a 0.898 increase in the level of profitability. However the model might be

27.5% wrong in its prediction as shown by the t and F significances.

Banks are exposed to credit risk due to information asymmetry. Banks do not know ex

ante the proportion of loans that will perform and even when they carry out appraisals,

credit losses are not fully eliminated. To cover credit risk, banks charge a premium whose

size depends on the bank credit policy, interest on alternative assets, amount borrowed,

and type of client and size of collateral. These increases the effective rates paid by

borrowers and reduce the demand for loans.

According to table 1, the maximum aggregate loan advances for the study period

approximated 670 billion while the minimum amount was 417 billion. The maximum

gross NPA was 112 billion while the minimum annual value was 57 billion.

4.4.2 Interaction between Interest Rate Spread and NPA Ratio

According to table 4.11, the maximum value of non-performing asset ratio was approximated at 34.85% while the minimum value was 9.23. The maximum interest rate spread value was 25.19% while the minimum value was 12.25%.

4.5 Analysis of CBK Reports

4.5.1 Regulations

On regulations, the findings showed that CBK regulates interest rates charged by banks through interest rate ceiling. The banks' interest rates policies are enforced by board of directors, managing directors and credit risk management committees. The research also found that the interest rate policies and regulations there-to are relevant in mitigating interest rates, moral hazards and loan defaults.

4.5.2 Cost of loans

On the cost of loans, that 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 was found to contribute more to NPA since the cost interval was found to be 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. 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. In cognizance of this, the findings showed that majority of the commercial banks adopt both fixed and floating interest rates. In order to mitigate the cost of loans, most of the banks review the same on either a monthly basis or continuously as a credit risk management.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS.

5.1 Introduction

Interest rate spread is one of the major financial pillar which really affects the performance of the financial institutions in general and the same time can be a stimulus for economic growth in the country since banks plays vital role of the intermediaries between those who have excess and those who are in need of funds.

5.2 Summary

The study found that increase in interest rate caused an increase in profitability, though at a very small rate. Increase in the level of interest rate spread leads to a 0.898 increase in the level of NPL. Banks are exposed to credit risk due to information asymmetry.

The banks' interest rates policies are enforced by board of directors, managing directors and credit risk management committees. Fixed interest rate was found to contribute more to NPA since the cost interval was found to be 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.

It was observed that variations in the interest rate spread reflect monetary and fiscal policy actions, where expansionary fiscal policy partly increased inflationary pressure and the monetary authority responded by tightening the monetary policy and revising interest rates upwards by the Central bank of Kenya. However, if the financial market

was operating in an efficiency manner the spread would be narrow to reflect efficiency gains and reduced transaction costs with the removal of distortionary policies and strengthening of the institutional set-up.

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. In cognizance of this, the findings showed that majority of the commercial banks adopt both fixed and floating interest rates. In order to mitigate the cost of loans, most of the banks review the same on either a monthly basis or continuously as a credit risk management.

5.3 Conclusion

Interest rate spread affect the non-performing assets in banks as it increases the cost of loans charged on the borrowers. Mode or type of interest rate charged (whether fixed or float) for they all have different dynamics that might affect the borrower's ability to repay credit loaned. Goldstein and Turner (1996) also concluded that accumulation of non-performing assets is attributable to high cost of loans.

Regulations on interest rates have far reaching effects on loan non-performance for such regulations determine the interest rate spread in banks and also help mitigate moral hazards incidental to NPAs. When the regulations are lax or ineffective, the level of non-performing assets increases. In Kenya, banks specific policies and regulations are the

responsibility of board of directors, managing directors and credit risk management committees. This concurs with Demirguc-Kunt and Huizinga (1997) finding that stringent regulations enforced by central banks lower realized interest margins (spread) and subsequently loan non-performance.

As much as there are many commercial banks in Kenya as a result of liberalization most of their banks continue to use their power in determining their interest rates that are less favourable to both the depositors and the borrowers. Although the spreads are relative in elastic with respect to the Central bank discount rate, It is apparent that commercial banks respond to high interest rates by shifting their cost of financing to their liquidity to consumers.

It was also worthy to note that Credit risk management techniques employed by the Financial Institutions remotely affects the value of a bank's interest rates spread as interest rates are benchmarked against the associated non-performing assets. Credit risk assessment and management ensures that loans are channeled to intended purposes, loans are allocated to only those who qualify/and have the ability to repay, loan security/collateral is enough to cover loan, assessment of the character of the loan candidate and there is sufficient margin to cover loan. Credit risk management, therefore, directly influences the level of asset nonperformance in commercial banks.

5.4 Recommendations

The study recommends that commercial banks in Kenya should assess their clients and charge interest rates accordingly in order to mitigate the risks associated with the defaulters since the rate (cost) on loans has an effect on the non –performing loans, as ineffective interest rate policy can increase the level of interest rates and consequently NPA. Given that the type of interest rates charged on loans (fixed and floats) dictates on the ability and flexibility of borrowers to repay loans, the study recommends that commercial banks should have a mixed interest rate policy as each type has its advantage and disadvantage.

The central banks should apply stringent regulations on interest rates charged by banks so as to regulate their interest rate spread. Commercial banks should also apply rigorous policies on loan advances so as loans are awarded to those with ability to repay and mitigate moral hazards such as insider lending and information asymmetry.

Banks should apply efficient and effective credit risk management that will ensure that loans are matched with ability to repay, no or minimal insider lending, loan defaults are projected accordingly and relevant measures taken to minimize the same. The banks should also enhance periodic/regular credit risk monitoring of their loan portfolios to reduce the level of NPA.

It is necessary to strengthen the institutional framework, including review of the regulatory and legal framework. This should target enhancing confidence among depositors and investors and strengthening enforceability of loan contracts. As a result, this will enhance stability in the financial sector and reduce costs of capital to investors. It should also serve to strengthen the supervisory and monetary control role of the Central Bank and will avoid the current conflict between monetary and fiscal policy in the use of open market operations in the sale of Treasury bills. At the same time, there is an urgent need to strengthen the credibility of monetary policy. This also allows the financial sector to gain stability and thus reduce risk to investors. Enhancing enforcement of contracts would also reduce risk premium in the financial sector.

Macroeconomic stability is vital for a successful financial liberalization process, thus policy actions should be taken to ensure sustainable growth of the economy. Stability of key prices, including the exchange rate, commodity prices and interest rates, is crucial. This will stimulate high investment returns and reduce the credit risk, consequently reducing the risk premium tagged on loan interest rate. In addition, it would discourage banks from non-intermediation activities while enhancing the move towards an equilibrium position in the loans market.

Implicit taxes should be kept at minimal levels by maintaining low reserve- and cash-requirement ratios. This will ensure that lending rates are kept down as banks endeavour to maintain their profit margins. Banks should perform more of the intermediation

process than investing in short-term Treasury bills, and this could be achieved by re-aligning Treasury bill rates with other returns on short run financial assets and pushing for competitiveness in the market. The end result will be to force banks to divert their efforts to investing in information capital, thus reducing the moral-hazard and adverse-selection problems that are compounded by poor monitoring and evaluation of the investment projects.

Conduct of monetary policy should be in line with the goals of financial-sector reform and the conduct of monetary policy should support financial-sector growth. This can be achieved by using the main instrument of monetary policy, that is, the interest rate. So far it has worked to discourage financial intermediation and to turn banks into short-term deposit-taking institutions. Fortunately, some banks have recently realized that this route has weakened their operations and are reverting to long-term finance.

The economic performance of the country also plays a vital role since a decline in the economy performance in the country exerts pressure on banks spreads through high marginal costs of capital which affects banks profitability.

5.4 Limitations of the Study

There were challenges encountered during the study and among them the bureaucracy involved to get the data from Central Bank of Kenya. It was time consuming and costly calling the contact person for the data.

Again Comparison of the data for a long period would have provided more insightful conclusion. The period of collecting data was also short and I was forced to take leave in order to look for the data. Again the distance involved of commuting from the Place of work to Nairobi was not easy and in most of the time traffic along Mombasa road was a problem to me.

Lastly getting a person who would help me to retrieve the data from the CBK reports was not easy and in most time being a senior officer most of the time was out of the office due to nature of his work.

5.5 Areas for further research

For a more encompassing and exhaustive empirical analysis, disaggregated financial data, especially for the banking subsector are required. These data are required in order to capture factors such as: market power, transaction costs, banks' adjustment strategies at the end of the period, in-depth study on institutions and risk analysis.

In addition, it would be interesting to examine the information content of the spread in terms of forecasting macroeconomic variables such as investment, inflation and growth. To find out the relationship between the bank interest rate margin and growth of the economy and the implication of widening spread on investment and mobilization of savings.

The study also recommends that a further research should be done on the relationship between the capital structure and the interest spreads to ascertain whether it has implications on the financial performance of all the commercial banks in Kenya.

Again a study should also be carried out to ascertain whether there is efficiency gained in the financial institutions as a result of the liberalization of the market by the government and whether it has brought some gains in the economy both to the government and the customers.

In addition to above proposals another study should be carried out to ascertain whether the regulator i.e. Central Bank of Kenya monitors properly the rates the commercial banks are charging to their depositors and the borrowers based on their guidelines and implications it has on the general economic performance.

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APPENDIX 1

Decomposition of Interest Spreads Over Time

All Banks	2004	2005	2006	2007	2008	2009	2010
Average Lending Rate	25.03	24.47	25.89	24.64	21.45	22.75	12.22
Average Deposit Rate	5.79	4.62	3.53	2.00	1.36	2.60	2.57
Spread	19.25	19.85	22.36	22.64	20.10	20.16	9.78
Overhead Costs	6.94	6.49	7.53	6.60	5.83	5.99	3.10
Loan-loss Provisions	4.28	2.66	3.43	2.68	2.02	1.68	1.64
Reserve Requirement	0.64	0.51	0.39	0.22	0.15	0.29	0.29
Taxes	2.21	3.05	3.30	3.94	3.63	3.66	1.39
Profit Margin	5.16	7.12	7.71	9.20	8.47	8.54	3.85

(Source: CBK 2011)

APPENDIX II

Aggregate performance of Commercial Banks and Interest Rate Spread Data from 2004 to 2010

Year	Gross Loans and	Gross Profitability and	Loans	Interest rate
2004	261418	35934	13.75	18.34
2005	315321	109898	34.85	13.47
2006	382290	111889	29.27	12.25
2007	417300	106500	25.52	13.16
2008	473100	100700	21.29	13.64
2009	533800	56800	10.64	13.32
2010	670372	61869	9.23	14.01
Maximum	**670372**	**111889**	**34.85**	**18.34**
Minimum	**417300**	**56800**	**9.23**	**12.25**

Source: CBK Statistics