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DETERMINANTS OF INTEREST RATE SPREAD AMONG COMMERCIAL BANKS IN KENYA

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DETERMINANTS OF INTEREST RATE SPREAD AMONG COMMERCIAL BANKS IN KENYA

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Abstract

Purpose: This study sought to find the determinant of interest rate spread among commercial banks in Kenya.

Methodology: The study used a descriptive research design. The target population of this study included all the commercial banks in Kenya since the small number of population called for a census survey of all the banks. The study used secondary data which includes the governments' publications, journals, banking survey reports, annual reports of the Commercial banks in Kenya and periodicals. Quantitative data was collected. Secondary data used to calculate interest rate spread was collected from the annual statements of the sampled commercial banks. The study used both descriptive and inferential statistics. The descriptive statistics included trend analysis, mean and standard deviation. The study used a pooled OLS regression model to analyze the relationship between the independent and dependent variables.

Results: The regression results indicate that there is a positive and significant relationship between market structure and interest spread. This finding was supported by a regression coefficient of 0.200 (p value = 0.000). The reported p value was less than the critical p value of 0.05. The results also indicated that there is a positive and significant relationship between credit risk and interest spread. This finding was supported by a regression coefficient of 0.096 (p value = 0.008). The reported p value was less than the critical p value of 0.05. This implies that an increase in credit risk by one unit would result to an increase in the interest spread by 0.096 units. Further, the results indicate that there is a positive but insignificant relationship between access to information and interest spread. The regression results also indicated that there is a negative and significant relationship between regulation and interest spread. This finding was supported by a regression coefficient of -1.309 (p value = 0.000). The reported p value was less than the critical p value of 0.05.

Unique contribution to theory, practice and policy: The study recommended that commercial banks should be encouraged to use the information from the credit reference bureaus so as to maintain a lower interest spread among Commercial banks in Kenya. The study also recommended that the central bank should licence more CRBs which would assist the

commercial banks in lowering the credit risk. the study recommended that the central bank should review the monetary policy and lower the T- bill (91 days). This would help to lower the interest spread among Commercial banks in Kenya.

Keywords: *interest rate spread, credit risk, regulation, distribution, information, market power.*

1.0 BACKGROUND OF THE STUDY

A key indicator of financial performance and efficiency in the banking sector is the spread between the lending and deposit rates. If the spread is large, it works as an impediment to the expansion and development of financial intermediation. This is because it discourages potential savers due to low returns on deposit and thus limits financing for potential borrowers. High lending rates on the other hand would lead to a reduction in credit demand and the money supply as a result of the high cost of borrowing (Aziakpono, Wilson and Manuel, 2005). Banks are the main source of credit and have a direct impact on the level of investment and expenditure in an economy.

1.1 Global Perspective

Interest rate is the price a borrower pays for the use of money they borrow from a financial institution or fee paid on borrowed assets (Crowley, 2007). Interest rates are normally expressed as a percentage rate over the period of one year. Interest rate as a price of money reflects market information regarding expected change in the purchasing power of money or future inflation (Emmanuelle, 2003).

1.2 Regional Perspective

In developing countries, interest rate spreads arise out of the core functions of financial institutions most especially the commercial banks which include lending and deposits taking. As banks lend, they charge interest and for attracting deposits, they offer interest on deposit as compensation for their clients' thriftiness and the difference between the two rates forms the spread. Researchers have attributed the existence of high IRS in developing countries to several factors, such as high operating costs, financial repression, lack of competition and market power of a few large dominant banks enabling them to manipulate industry variables including lending and deposit rates, high inflation rates, high risk premiums in formal credit markets due to widely prevailing perception relating to high risk for most borrowers, and similar other factors (Mujeri and Islam 2008).

1.3 Local Perspective

Interest rate spread is defined by market microstructure characteristics of the banking sector and the Kenya policy environment (Ngugi, 2001). 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. Actual spread, which incorporates the pure spread, is in addition influenced by macroeconomic variables including monetary and fiscal policy activities. Two models are used to define the spread: the accounting value of net interest margin and the firm maximization behaviour. The accounting value of net interest margin uses the income statement of commercial banks, defining the bank interest rate margin as the difference between the banks' interest income and interest expenses, which is expressed as a percentage of average earning

assets. Depending on the market structure and risk management, the banking firm is assumed to maximize either the expected utility of profits or the expected profits. And, depending on the assumed market structure, the interest spread components vary (Wagacha, 2001).

1.4 Interest rates Spread

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. The terms and conditions attached to these rates differ by country, however, limiting their comparability. It involves the difference or spread between two related interest rates occurring in many types of business or finance transactions.

1.4.1 Factors that Influence Interest Spread

Generally, empirical studies that examine the determination of bank interest rate spreads use variables that basically fall in three categories:

Individual bank-specific factors; these are

Operating or administrative costs which are the expenses related to the operation of the business examples are rent, salaries, insurance expenses etc. Non-performing loans which describe a loan on which the borrower is not making interest or principal payments. The point at which the loan is classified as nonperforming by the bank and when it becomes a bad debt depend on local regulations. Return on assets which shows the percentage of how profitable a company assets i generating revenue. Structure of the balance sheet which is the way company's assets and liabilities are classified for example assets and liabilities which are further decided to current and noncurrent assets and liabilities.

Non-interest income mainly from service and penalty charges and to a much less extent from asset sales and property leasing. This income is largely unaffected by economic and financial market cycles and is usually not controlled by law or regulation. Bank liquidity which is the ability and ease with which assets can be converted to cash quickly if needed to meet financial obligation; examples of liquid assets generally include cash, central bank reserves and government debt.

Factors specific to the banking industry; they includes

Degree of competition or market concentration, Regulatory requirements such as statutory reserve requirements or regulated minimum deposit rates. Macroeconomic indicators, these are real gross domestic product (GDP) growth rate and Inflation rate.

1.4.2 Commercial Banking Sector

A commercial bank is a type of bank that provides services such as accepting deposits, making business loans, and offering basic investment products. Commercial bank can also refer to a bank or a division of a bank that mostly deals with deposits and loans from corporations or large businesses, as opposed to individual members of the public.

Commercial banks engage in the following activities:

Accepting Deposits is the most important function of commercial banks. They accept deposits in several forms according to requirements of different sections of the society which are Current

Account Deposits or Demand Deposits: These deposits refer to those deposits which are repayable by the banks on demand: These deposits combine features of both current account deposits and fixed deposits: The depositors are given cheque facility to withdraw money from their account. But, some restrictions are imposed on number and amount of withdrawals, in order to discourage frequent use of saving deposits. They also carry a rate of interest which is less than interest rate on fixed deposits. It must be noted that Current Account deposits and saving deposits are chequable deposits, whereas, fixed deposit is a non-chequable deposit. Another function of commercial banks is advancing loans since the deposits received by banks are not allowed to remain idle. After keeping certain cash reserves, the balance is given to needy borrowers and interest is charged from them, which is the main source of income for these banks. There are different types of loans such as Cash Credit loan which refers to a loan given to the borrower against his current assets like shares, stocks, bonds. Another type of loan is Demand loans refer to those loans which can be recalled on demand by the bank at any time. Overdraft Facility is another function which refers to a facility in which a customer is allowed to overdraw his current account up to an agreed limit. This facility is generally given to respectable and reliable customers for a short period. Customers have to pay interest to the bank on the amount overdrawn by them. Commercial banks discount Bills of Exchange whereby the holder of a bill of exchange can get the bill discounted with bank before the maturity. After deducting the commission, bank pays the balance to the holder. On maturity, bank gets its payment from the party which had accepted the bill. Commercial banks also perform certain agency functions for their customers. For these services, banks charge some commission from their clients. Some of the agency functions are transfer of Funds where banks provide the facility of economical and easy remittance of funds from place-to-place with the help of instruments like demand drafts, mail transfers, etc. They also collect cheques, bills, interest, dividends, subscriptions, rents and other periodical receipts on behalf of their customers and also make payments of taxes, insurance premium, etc. on standing instructions of their clients. Traditionally, large commercial banks also underwrite bonds, and make markets in currency, interest rates, and credit-related securities, but today large commercial banks usually have an investment bank arm that is involved in the said activities. The Companies Act, the Banking Act, the Central Bank of Kenya Act and the various prudential guidelines issued by the Central Bank of Kenya (CBK), governs the Banking industry in Kenya. The banking sector has embraced changes occurring in Information Technology with most banks having already achieved branchless banking as a result of the adoption of communications options. According to The Central Bank Annual Supervision report (2003), the increased utilization of modern information and communications technology has for example led to several banks acquiring ATMs as part of their branchless development strategy measures. Commercial banks in Kenya are categorized in three tier groups on the basis of the value of bank assets. Tier group one are banks with an asset base of more than Ksh40 billion, tier group two are Commercial banks with asset base between Ksh40 billion and Ksh10 billion while tier group three are banks with asset base of less than Ksh10 billion. According to the 2009 Banking Survey, there are eleven Commercial banks in tier group one, eleven Commercial banks in tier group two and twenty one Commercial banks in tier group three comprising to a total of forty three Commercial banks.

1.5 Research Problem

Banking systems have been shown to exhibit significantly and persistently large interest rate spreads on average than those in other developing and developed countries (Nannyonjo, 2002; Beck and Hesse, 2006). The size of banking spreads serves as an indicator of efficiency in the financial sector because it reflects the costs of intermediation that banks incur (including normal profits). Some of these costs are imposed by the macroeconomic, regulatory and institutional environment in which banks operate while others are attributable to the internal characteristics of the banks themselves (Robinson, 2002). High Interest rate Spreads are an impediment to financial intermediation, as they discourage potential savers with low returns on deposits and increase financing costs for borrowers, thus reducing investment and growth opportunities. Lending rates continue to ride high while lower rates are being offered on deposits. In 2005, for example, the average interest rate spread hit 20% with dispersions in the range of 18% to 34% while at the same time, the net interest margins hit 13%, compared to 7.4% on average in the sub-Saharan African region, 6.3% on the average in low-income countries, and 5% in the world, and moreover, higher in comparison to neighbouring Uganda and Tanzania. Ngugi (2001) analyzing interest rate in Kenya found a widening interest rate spread 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. According to Ndung'u and Ngugi (2000), deposit rates remained low while lending rates kept moving upwards. As of December 2003, the nominal average savings deposit rate in Kenya among commercial banks was 3.51% while the nominal lending rate was 14.11%. The spread was 10.6% ,Compared to the 1980s and early 1990s when the spreads remained below 4%, these wide spreads in later years were not healthy for the economy. According to Ndung'u and Ngugi (2000:5), the widening interest rate spreads indicated either inefficiency in the intermediation process with weak institutional infrastructure; macroeconomic instability; or a non-competitive structure in the banking sector. According to Kithinji and Waweru (2007), that banking problems is back-dated as early as 1986 culminating in major bank failures (37 failed banks as at 1998) following the crises of 1986 to 1989, 1993/1994 and 1998; they attributed these crises to NPLs which is due to the interest rate spread.

1.6 Research objective

The study aimed at establishing the determinants of interest rate spread among commercial banks in Kenya. The study was guided by establishing the effects of credit risk, assessing effects of market structure, establishing the effects of regulation and to determine the effects of access to information and distribution of market power on interest rate spread among commercial banks in Kenya.

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of related literature on the subject under study presented by various researchers, scholars, analyst and authors. The research has drawn materials from several sources which are closely related to the theme and the objectives of the study. The specific area

covered here includes the theoretical underpinnings of the study, the empirical review and finally a section on the conceptual and operational framework.

2.2 Theoretical Review

According to Zima (2007), a theory is a set of assumptions, propositions, or accepted facts that attempts to provide a plausible or rational explanation of cause-and-effect (causal) relationships among a group of observed phenomenon. A theoretical framework on the other hand is a group of related ideas that provides guidance to a research project or business endeavour (Zima, 2007).

2.2.1 Financial Liberalization Theory

Political economy theorists like Rajan and Zingales(1998), Chinn and Ito (2006) basically insist that financial liberalization helps in enhancing financial intermediation proxied by lower spreads as it dismantles the perfect rent seeking environments created by financial institutions that operate in repressed financial regimes. They further contend that opening up of the capital account helps attract foreign players in the domestic capital markets which are a prerequisite for augmentation of developing market.

Moreover this is reinforced by Guiso *et al*, (2006) who in their study, find that financial liberalization in Italy was preceded by easier access to finances and significant slowdown in the interest rate spreads. In most of the empirical studies on financial liberalization and interest spreads underlies the fact that more controlled financial systems are neither the solution to narrowing spreads as this leads to opacity, corruption and crony capitalism all of which are wasteful and set the foundation for wider spreads (Jayati, 2005). This justifies the multi-sectoral approach adopted by countries like China, and the other Asian tigers which provide for self correction mechanisms that cater for better financing while protecting the economy during and after the reforms (Wyplosz, 2001).

2.2.2 Loanable Funds Theory

According to the loanable funds theory of interest, the rate of interest is calculated on the basis of demand and supply of loanable funds present in the capital market. The concept formulated by Wicksell (1952), the well-known Swedish economist, is among the most important economic theories. Basic tenet of the loanable funds theory of interest advocates that both savings and investments are responsible for the determination of the rates of interest in the long run. When the interest rates are high the savings and investments are low hence the amount of money in circulations. This reduces the disposable income of an individual. Low interest rates stimulate the investments through borrowing of funds that consequently yield high returns and saving. The disposable income for individuals and companies increase as a result. The dependable variable the disposable income relies on the loan interest rates and varies with the change in the interest rate (Wicksell, 1952). On the other hand, short-term interest rates are calculated on the basis of the financial conditions of a particular economy. The determination of the interest rates in case of the loanable funds theory of the rate of interest depends essentially on the availability of loan amounts. The availability of such loan amounts is based on certain factors like the net increase in currency deposits, the amount of savings made, willingness to enhance cash balances and opportunities for the formation of fresh capitals. According to the loanable funds theory of interest the nominal rate of interest is determined by the interaction between the demand and

supply of loanable funds. Keeping the same level of supply, an increase in the demand of loanable funds would lead to an increase in the interest rate and vice versa is true. This will in turn decrease the disposable income that is available in the economy. Conversely an increase in the supply of loanable funds would result in the fall in the rate of interest. If the both demand and supply of the loanable funds change, the resultant interest rate would depend much of the magnitude and direction of movement of the demand and supply of loanable funds. This study attempts to identify how changes in interest rate affect the economy. This theory indicates the various factors that lead to fluctuations in the interest rates and consequently affecting the disposable income. Effects of loan interest rates on disposable income, the main variables are loan interest rates being the independent variable and disposable income as the dependent variable. Hence the literature review intends to concentrate on the loan interest rates and the disposable income.

2.2.3 Keynesian Theory

Keynesian theory show that they believe that the economy can settle at any equilibrium. This means that they recommend that the government gets actively involved in the economy to manage the level of demand Keynes (1936) the government uses tools such as interest rates to regulate the amount of money in the economy. If there is an increase in the amount of money the interest rates will be increased thus reducing the disposable income available to individuals.

Demand management means adjusting the level of demand to try to ensure that the economy arrives at full employment equilibrium. If there is a shortfall in demand, such as in a recession (a deflationary gap) then the government will need to reflate the economy. If there is an excess of demand, such as in a boom, then the government will need to deflate the economy.

2.3 Empirical review

2.3.1 Market Structure/condition

The 91-day T-bill rate has also been found to influence interest rate spread. In most of the countries, banks use this as their reference rate for pricing their loans and deposits. Moreover this is reinforced by the findings from the studies of Samuel and Valderrama (2006), Nannyonjo (2002), Tennant and Folawewo (2009) that indicate a positive correlation between the T-bill rate and Interest rate spreads. Though the former two studies' coefficients are significant, the latter manifested a weak linkage between the two. A positive relationship between the T-bill rate and interest rate spreads indicates that the higher the bill rate the higher the spreads and vice versa. This is so because the 91 days bill is used as the mirror for the risk return continuum of any financial system. Craigwell and Moore (2002) instead view wider spreads as a function of market structure and bank specific factors. To this end they postulate that size of a bank, its market power, and bank concentration have a higher explanatory power for intermediation spreads.

Therefore they conclude by indicating that smaller banks, a market with a few banks but with a higher market power and hence with high concentration are likely to lead to wider interest rate spreads. Nonetheless, in contrast to some of the preceding assertions are Panzar and Rosse(1987), and the IDB (2005) which disregard purported relationship between bank concentration and spreads.

2.3.2 Credit Risk

Bandyopadhyay(2007), contend that individual borrowers with characteristics such as divorced or separated, having several dependants, with unskilled manual occupation, uneducated, unemployed most of the year; are prone to defaulting on their credit obligations. This is supported by economic theories, most especially the human capital theory which regard education and training as an investment that can increase the scope of gainful employment and improve net productivity of an individual and hence their incomes. However though, the benefit of education and training has been underestimated in most of the studies on credit risk. Also, age and collateral position as creditworthiness factors raise a lot of controversy as mixed arguments have been raised as to their impact on the credit risk.

Sinkey and Greenwalt (1991), for instance, investigate the loan loss-experience of large commercial banks in the US by employing a simple log-linear regression model and data of large commercial banks in the United States from 1984 to 1987. They argue that both internal and external factors explain the loan-loss rate (defined as net loan charge offs plus NPLs divided by total loans plus net charge-offs) of these banks.

These authors find a significant positive relationship between the loan-loss rate and internal factors such as high interest rates, excessive lending, and volatile funds. Sinkey and Greenwalt (1991) report that depressed regional economic conditions also explain the loss-rate of the commercial banks.

2.3.3 Regulation

Ngugi (2001) analyzed the interest rates spread in Kenya from 1970 to 1999 and found that interest rate spread increased because of yet-to-be gained efficiency and high intermediation costs. Increase in spread in the post-liberalization period was attributed to the failure to meet the prerequisites for successful financial reforms, the lag in adopting indirect monetary policy tools and reforming the legal system and banks' efforts to maintain threatened profit margins from increasing credit risk as the proportion of non-performing loans. She attributed the high non-performing loans to poor business environment and distress borrowing, owing to the lack of alternative sourcing for credit when banks increased the lending rate, and the weak legal system in enforcement of financial contracts. According to her findings, fiscal policy actions saw an increase in Treasury bill rates and high inflationary pressure that called for tightening of monetary policy. As a result, banks increased their lending rates but were reluctant to reduce the lending rate when the Treasury bill rate came down because of the declining income from loans.

2.3.4 Access to Information and Distribution of Market Power

Chirwa et al (2004) used panel data techniques to investigate the causes of interest rate spreads in the commercial banking system of Malawi over the liberalised period of the 1990s. Their results show that high interest rate spreads were attributable to monopoly power, high reserve requirements, high central bank discount rate and high inflation. Demirguc-Kunt et al (2009) using bank level data for 80 industrial and developing countries over the period 1988-1995 show that differences in interest margins reflect a variety of determinants such as bank characteristics, macroeconomic conditions, explicit and implicit bank taxes and the overall financial structure.

Market power is proxied by the Herfindahl-Hirschman index (HHI) computed using the market shares of loans and advances in the banking industry. The spread is found to increase with an increase in market power, the regulated savings deposit rate, real GDP growth, reserve requirements, provision for loan losses and operating costs.

3.0 RESEARCH METHODOLOGY

The study used a descriptive research design. The target population of this study included all the commercial banks in Kenya since the small number of population called for a census survey of all the banks. The study used secondary data which includes the governments' publications, journals, banking survey reports, annual reports of the Commercial banks in Kenya and periodicals. Quantitative data was collected. Secondary data used to calculate interest rate spread was collected from the annual statements of the sampled commercial banks. The study used both descriptive and inferential statistics. The descriptive statistics included trend analysis, mean and standard deviation. The study used a pooled OLS regression model to analyze the relationship between the independent and dependent variables.

4.0 RESULTS AND DISCUSSIONS

4.1 Trend Analysis

This section analyzes the effect of credit risks, market structure, regulation and access to information on interest rates spread among commercial banks in Kenya banks.

4.1.1 Interest Spread

The results in figure 1 indicated that the commercial banking sector have witnessed a gradual rise in the Interest rate spread. There was an increase in mean of interest spread from mean of 9% in year (2005) to mean of 12 in year (2012) though it again declined from year (2013) to year (2014). The drastic increase of the interest spread in the year 2012 can be explained by the fact that the central bank increased the lending rates for banks.

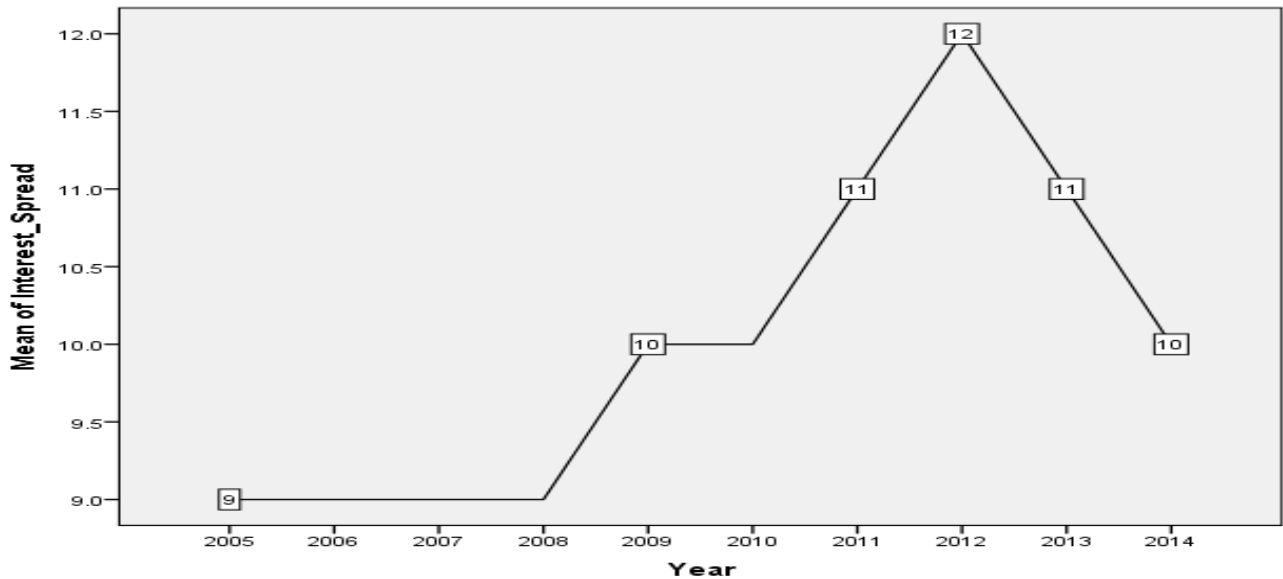


Figure 1: Mean of Interest Spread Year 2005 to year 2014

4.1.2 Market Structure

Results in figure 2 shows that the mean of market structure has been fluctuating with year (2010) being the lowest with mean of 4 and year (2012) being the highest with mean of 12%. The years (2006) and (2009) had same levels market structures.

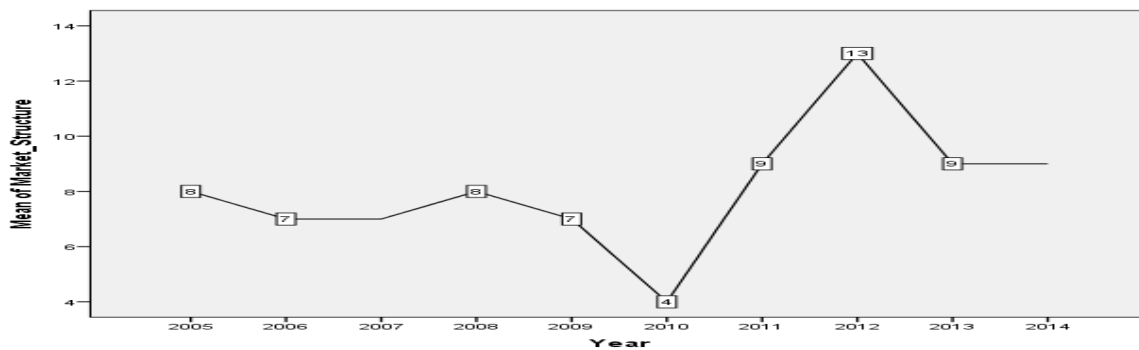


Figure 2: Mean of Market Structure Year 2005 to year 2014

4.1.3 Credit Risk

Results in figure 3 show that credit Risk was high in the year (2005) but gradually and steadily started to decline down the following years with figures being lowest in the years 2010- 2012 but rose slightly 2013 and 2014. This could be attributed to commercial banks strategies to minimise credit risks arising from defaulters.

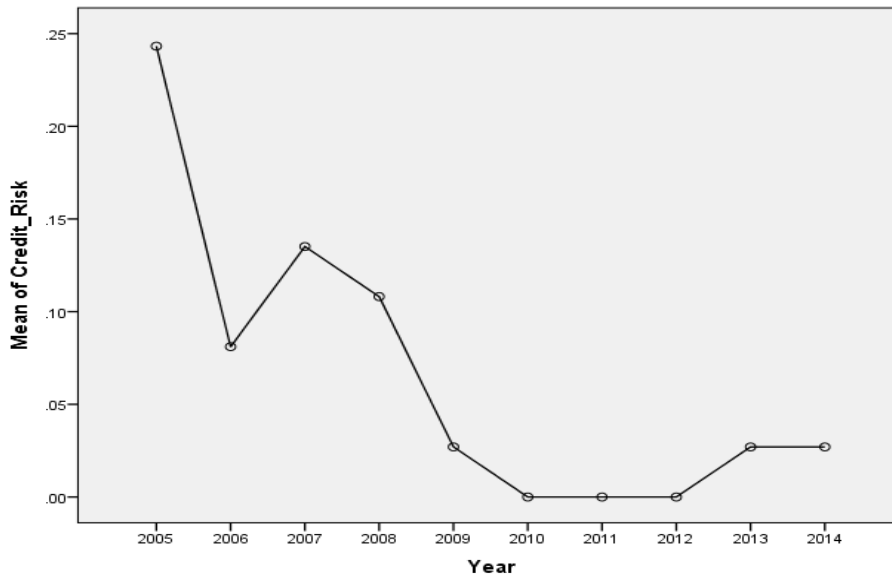


Figure 3: Mean of Credit Risk Year 2005 to year 2014

4.1.4 Access to Information

Figure 4 below shows that mean of access to information (measure by HHI) increased steadily from year (2005) to year (2006) and hitting high in year (2008). It later started declining slowly the following years.

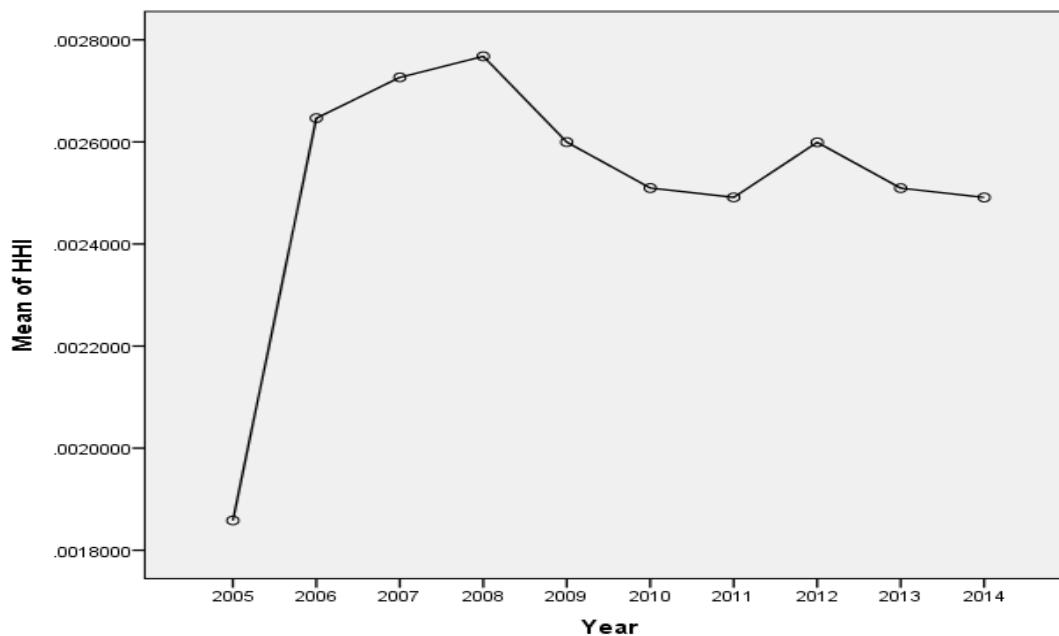


Figure 4: Mean of HHI Year 2005 to year 2014

4.1.5 Regulation

Results in figure 5 show that there was no regulation from the year (2005) to the year (2009) but it was later adopted whereas regulations shoot steadily to mean of 1.0 in the year (2009) and remained in the same level the rest of the years.

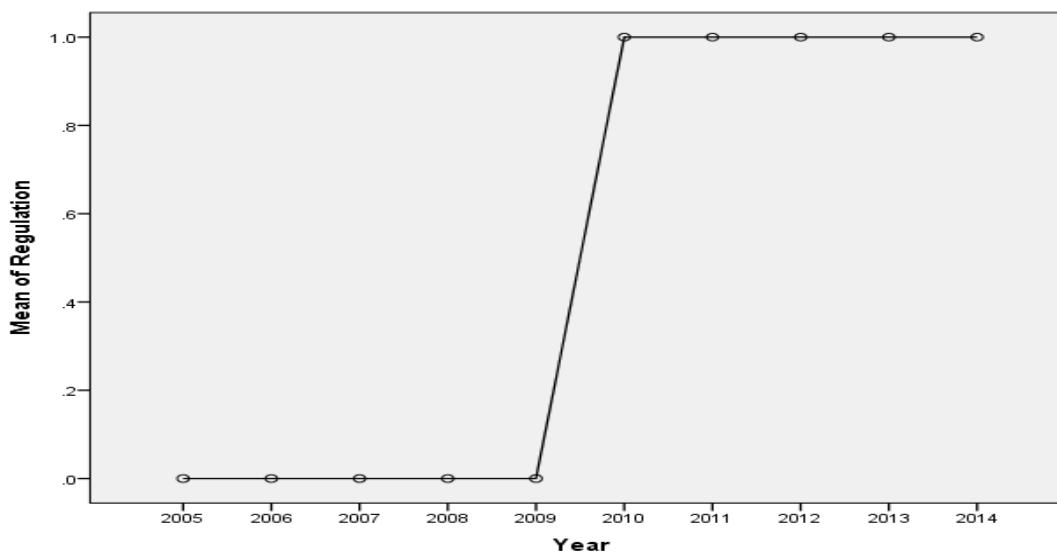


Figure 5: Mean of Regulation Year 2005 to year 2014

4.2 Descriptive Statistics

The results in table 1 show the descriptive results. The results give further details on the determinants of interest spreads among commercial banks in Kenya. The mean and the standard deviation are given. The mean interest spread for the 34 banks over the 10 years was 10 while the standard deviation was 1.001. The mean market structure for the 34 banks over the 10 years was 8.1 while the standard deviation was 2.169. The mean credit risk for the 34 banks over the 10 years was 0.06 while the standard deviation was 0.377. The mean HHI for the 34 banks over the 10 years was 0.003 while the standard deviation was 0.006. The mean Regulation for the 34 banks over the 10 years was 0.500 while the standard deviation was 0.501.

Table 1: Descriptive Statistics

Variable	N	Mean	Std Dev
Interest spread	37	10.000	1.001
Market Structure	37	8.100	2.169
Credit Risk	37	0.060	0.377
HHI	37	0.003	0.006

Regulation	37	0.500	0.501
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4.3 Regression Analysis

Regression analysis results presented in table 2 indicates that the goodness of fit of the model was satisfactory. The coefficient of determination (R squared) was 0.809. An R square of 0.809 indicates that 80.9% of the variation in interest spread is explained by the independent variables (market structure, credit risk, access to information and regulation). This implies that 19.1% of the variations in interest expense are explained by other factors not included in the model.

Table 2: Goodness of fit (Coefficient of Determination)

Indicator	Coefficient
R	0.9
R Square	0.809
Adjusted R Square	0.807
Std. Error of the Estimate	0.44

Results in table 3 presents the overall model significance. The results indicate that the overall model was significant. The reported F statistic of 387.24 in table 4.3 was larger than the F critical (F tabulated). The reported p value was lower than the critical p value of 0.05. The findings imply that the independent variables are good joint predictors of interest spread.

Table 3: Analysis of Variance (ANOVA)

Indicator	Sum of Squares	df	Mean Square	F	Sig.
Regression	299.439	4	74.86	387.24	0.000
Residual	70.561	365	0.193		
Total	370	369			

The regression coefficients and their associated t statistics and p values are presented in table 4.4. The results indicate that there is a positive and significant relationship between market structure and interest spread. This finding was supported by a regression coefficient of 0.200 (p value = 0.000). The reported p value was less than the critical p value of 0.05. This implies that an increase in market structure by one unit would result to an increase in the interest spread by 0.200 units. The results indicate that there is a positive and significant relationship between credit risk and interest spread. This finding was supported by a regression coefficient of 0.096 (p value

= 0.008). The reported p value was less than the critical p value of 0.05. This implies that an increase in credit risk by one unit would result to an increase in the interest spread by 0.096 units. Further, the results indicate that there is a positive and insignificant relationship between access to information and interest spread. This implies that an increase in access to information by one unit would result to no change in the interest spread. The results in table 4.4 also indicate that there is a negative and significant relationship between regulation and interest spread. This finding was supported by a regression coefficient of -1.309 (p value = 0.000). The reported p value was less than the critical p value of 0.05. This implies that an increase in regulation by one unit would result to a decrease in the interest spread by 1.309 units.

Table 4: Regression Coefficients

Variable	B	Std. Error	t	Sig.
Constant	7.727	0.089	86.459	0.000
Market Structure	0.200	0.011	17.955	0.000
Credit Risk	0.096	0.046	1.567	0.008
Access to Information	0.805	3.938	0.204	0.838
Regulation	-1.309	0.049	-26.829	0.000

4.4 Discussion

The results indicated that the commercial banking sector have witnessed a gradual rise in the Interest rate spread. There was an increase in mean of interest spread from mean on 9 in year (2005) to mean of 12 in year (2012) though it again declined from year (2013) to year (2014). The drastic increase of the interest spread in the year 2012 can be explained by the fact that the central bank increased the lending rates for banks. Results also showed that the mean of market structure has been fluctuating with year (2010) being the lowest with mean of 4 and year (2012) being the highest with mean 12. The years (2006) and (2009) had same levels market structures. Further, results showed that mean of access to information (measure by HHI) increased steadily from year (2005) to year (2006) and hitting high in year (2008). It later started declining slowly the following years. Results also showed that there was no regulation from the year (2005) to the year (2009) but it was later adopted whereas regulations shoot steadily to mean of 1.0 in the year (2009) and remained in the same level the rest of the years. This can be explained by the fact that in Kenya there were Credit Reference Bureaus (CRBs) until the year 2010 when the first CRB was registered. The regression results indicate that there is a positive and significant relationship between market structure and interest spread. This finding was supported by a regression coefficient of 0.200 (p value = 0.000). The reported p value was less than the critical p value of 0.05. This implies that an increase in market structure by one unit would result to an increase in the interest spread by 0.200 units. These findings are consistent with those of Samuel and Valderrama (2006) who indicated that the 91-day T-bill rate has been found to influence interest

rate spread. Moreover this is reinforced by the findings from the studies of Nannyonjo (2002), Tennant and Folawewo (2009) that indicate a positive correlation between the T-bill rate and Interest rate spreads. The results indicate that there is a positive and significant relationship between credit risk and interest spread. This finding was supported by a regression coefficient of 0.096 (p value = 0.008). The reported p value was less than the critical p value of 0.05. This implies that an increase in credit risk by one unit would result to an increase in the interest spread by 0.096 units. These findings agree with those of Sinkey and Greenwalt (1991) who investigate the loan loss-experience of large commercial banks in the US from the year 1984 to 1987. The study argued that both internal and external factors explain the loan-loss rate (defined as net loan charge offs plus NPLs divided by total loans plus net charge-offs) of these banks. These study found a significant positive relationship between the loan-loss rate and internal factors such as high interest rates, excessive lending, and volatile funds. Further, the results indicate that there is a positive but insignificant relationship between access to information and interest spread. This implies that an increase in access to information by one unit would result to no change in the interest spread. These findings are not consistent with those of Chirwa et al., (2004) who proxied Market power by the Herfindahl-Hirschman index (HHI) computed using the market shares of loans and advances in the banking industry. The study revealed that the interest spread increases with an increase in market power, the regulated savings deposit rate, real GDP growth, reserve requirements, provision for loan losses and operating costs. The regression results also indicated that there is a negative and significant relationship between regulation and interest spread. This finding was supported by a regression coefficient of -1.309 (p value = 0.000). The reported p value was less than the critical p value of 0.05. This implies that an increase in regulation by one unit would result to a decrease in the interest spread by 1.309 units. These findings concur with those of Ngugi (2001) who analyzed the interest rates spread in Kenya from 1970 to 1999. The study found that interest rate spread increased because of yet-to-be gained efficiency and high intermediation costs. The increase was attributed to the high proportion of non-performing loans.

5.0 DISCUSSION CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of Findings

Descriptive results in chapter four indicate that the commercial banking sector have witnessed a gradual rise in the Interest rate spread. There was an increase in mean of interest spread from mean of 9 in year (2005) to mean of 12 in year (2012) though it again declined from year (2013) to year (2014). The drastic increase of the interest spread in the year 2012 can be explained by the fact that the central bank increased the lending rates for banks. Results also showed that the mean of market structure has been fluctuating with year (2010) being the lowest with mean of 4 and year (2012) being the highest with mean 12. The years (2006) and (2009) had same levels market structures. Further, results showed that mean of access to information (measure by HHI) increased steadily from year (2005) to year (2006) and hitting high in year (2008). It later started declining slowly the following years. Results also showed that there was no regulation from the year (2005) to the year (2009) but it was later adopted whereas regulations shoot steadily to mean of 1.0 in the year (2009) and remained in the same level the rest of the years. This can be explained by the fact that in Kenya there were Credit Reference Bureaus (CRBs) until the year 2010 when the first CRB was registered.

The regression results indicate that there is a positive and significant relationship between market structure and interest spread. This finding was supported by a regression coefficient of 0.200 (p value = 0.000). The reported p value was less than the critical p value of 0.05. This implies that an increase in market structure by one unit would result to an increase in the interest spread by 0.200 units. The results also indicated that there is a positive and significant relationship between credit risk and interest spread. This finding was supported by a regression coefficient of 0.096 (p value = 0.008). The reported p value was less than the critical p value of 0.05. This implies that an increase in credit risk by one unit would result to an increase in the interest spread by 0.096 units.

Further, the results indicate that there is a positive but insignificant relationship between access to information and interest spread. This implies that an increase in access to information by one unit would result to no change in the interest spread. The regression results also indicated that there is a negative and significant relationship between regulation and interest spread. This finding was supported by a regression coefficient of -1.309 (p value = 0.000). The reported p value was less than the critical p value of 0.05. This implies that an increase in regulation by one unit would result to a decrease in the interest spread by 1.309 units.

5.2 Conclusions

Results indicate that the commercial banking sector have witnessed a gradual rise in the Interest rate spread. This led to a conclusion that the interest spread has been increasing over time. Results also showed that the mean of market structure has been fluctuating over the year. This led to a conclusion that the market structure has been fluctuating over the years.

Further, results showed that mean of access to information (measure by HHI) increased steadily from year (2005) to year (2006) and hitting high in year (2008). This led to a conclusion that access to information has been increasing steadily over the years Results also showed that there was no regulation from the year (2005) to the year (2009) but it was later adopted whereas regulations shoot steadily to mean of 1.0 in the year (2009) and remained in the same level the rest of the years. This led to a conclusion that the introduction of Credit Reference Bureaus resulted to increased regulation.

Based on the regression results the study concluded that there exists a positive and significant relationship between market structure and interest spread. The study also concluded that there is a positive and significant relationship between credit risk and interest spread. Further, the study concluded that there is a positive but insignificant relationship between access to information and interest spread. Based on the regression results the study also concluded that there is a negative and significant relationship between regulation and interest spread.

5.3 Recommendations

Based on the study results, the study recommended that commercial banks should be encouraged to use the information from the credit reference bureaus so as to maintain a lower interest spread among Commercial banks in Kenya. This would encourage lending which would translate to better economic growth. The study also recommended that the central should licence more CRBs which would assist the commercial banks in lowering the credit risk. This would in return assist to lower the interest spread among Commercial banks in Kenya and thus encourage lending.

Further, the study recommended that the central bank should review the monetary policy and lower the T- bill (91 days). This would help to lower the interest spread among Commercial banks in Kenya.

5.4 Areas for Further Study

The study suggests that further studies should include a qualitative analysis of the relationship between market structure, credit risk, regulation, access to information and interest spreads among Commercial banks in Kenya. Such a study would involve interview of key informants in the banking sector and would provide hidden insights into the determinants of interest spread among Commercial banks in Kenya.

Further areas of study should be focus on a longer time span, probably 20 to 30 years. This would clarify whether the observed relationship changes over the years. Such a study would call for advanced econometric and statistical analysis such as time series and panel data analysis.

Future studies should include other factors that affect the interest spread among Commercial banks in Kenya. Such factors may include exchange rate and the inflation rate.

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