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Interest Rates Capping and Credit Uptake of Commercial Banks in Kenya

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Abstract

In 2016, Kenya enacted the Banking (amendment) Act 2016 which allowed lending interest rates charged by Commercial Banks in Kenya to be fixed at the Central Bank Rate plus a spread of 4% and deposit rates at 70% of the Central Bank Rate. Many banks protested this move since it meant reduced profitability. As a result, commercial banks introduced stringent credit qualification criteria locking out many borrowers who would have otherwise qualified for credit. Therefore, this study sought to establish how interest rate capping affects credit uptake of Commercial Banks in Kenya. The objectives of the study were; to determine the effect of capping lending interest rates, capping deposit interest rates, deposit interest rate spread on credit uptake of commercial banks in Kenya and the moderating effect of inflation risk premium on the relationship between interest rate capping and credit uptake of commercial banks in Kenya. The study was guided by four theories namely: Irving Fisher's Theory of Interest Rates, the Fisher Effect, Loan Pricing Theory and Loanable Funds Theory. The study conducted diagnostic test on multicollinearity normality test and Heteroscedasticity test. The study adopted descriptive research design. The target population for the study was all the 40 licensed commercial banks in Kenya. The sampling frame for the study was all (40) licensed commercial banks in Kenya. This study collected both primary and secondary data because both data reinforced each other. Primary data was collected using semi-structured questionnaires, while secondary data was collected from audited and released financial statements of Commercial Banks in Kenya for the period 2014–2019. The data was analyzed using multiple regressions and descriptive statistics namely: mean median, mode and standard deviation. Quantitative data was presented using tables, pie charts and bar graphs while qualitative data has been presented descriptively. The study established that while capping lending interest rates and interest rate spread had a significant effect on credit uptake of commercial banks in Kenya, capping deposit interest rates was insignificant and the relationship was significantly moderated by inflation risk premium. The study concluded that interest rate spread had the largest effect on credit uptake of commercial banks in Kenya followed by capping lending interest rates and lastly capping deposit interest rates. The study recommends that when formulating policies on

interest rate capping, the Central Bank of Kenya should focus more on the lending side as compared to the deposits side.

Keywords: *Interest rates capping, Credit uptake, Lending interest rates, Deposit interest rates, Interest rates spread, Inflation risk premium.*

1.0 Background of the Study

The banking sector plays an extremely important role in national economic development as the basic vehicle for channeling funds from lenders to consumers, making the sector one of the most successful as well as effective sector in playing the intermediation element of gathering funds from the people who have overabundance and providing it to others that need it for their monetary venture (Ghasemi & Rostami, 2016). Productive monetary intermediation of giving credit positioning to debt holders by monetary establishments, is one method for installment to the development of a country's economy (Musau, 2014). Business monetary foundations, which function as one of the essential money related delegate and furthermore a primary asset of supporting, manage the monetary market in the preparation of stores from overabundance systems to shortage devices in the kind of finance as well as breakthroughs (Heimdal & Solberg, 2015). Primarily commercial banks are mobilizers of funding for any several nations (Smriti & Chand, 2018).

The role played by commercial banks in country's economy cannot be overemphasized. The loan assets, representing between 50-75 percent (%) of the total assets in most commercial banks (most dominant asset of the investible resources), represent the banks greater risk exposure (Iftikhar, 2015). Commercial banks finance industries in several ways by providing short term, medium term and long term credit to them. For instance, in Latin American countries like Guatemala commercial banks provide mostly medium term loans and in North and South Korea they mostly provide long term loans (Smriti Chand, 2018). In India they provide mostly short term credit for entrepreneurship. Ceilings on lending rates remain a widely used policy tool that is intended to lower the overall cost of credit or protect consumers from exorbitant rates. Interest rate caps come in many forms and scopes and, according to their rationale, ceilings can affect a small segment or the overall market (Erickson, 2018). Over the past years, many countries have introduced new or tightened existing restrictions, while only a few have removed or eased them.

Islam, Porporato and Waweru (2018) indicate that South Africa had initially abolished usury laws on small loans in 1993 but afterwards in 2007 reintroduced a cap on short term loan at 5% per month. In addition, South Africa has seven separate ceilings for mortgages, credit facilities, unsecured credit transactions, development credit, short term transactions, other credit and incidental credit agreements. The lending interest rate is the percentage of the loan amount that the lender charges to lend money. When banks lend money to customers, interest is charged on it for a number of reasons, including value preservation, compensation for risk, and profits among others (Cotler & Almazan, 2018). Chen, Huang, Drakeford and Failler (2019) indicate that the lending rate is the bank rate that usually meets the short- and medium-term financing needs of the private sector. This rate is normally differentiated according to creditworthiness of borrowers and objectives of financing. Thus, determination of the appropriate lending rates usually becomes a major issue in banking industry.

The deposit interest rate is paid by financial institutions to deposit account holders which are attractive for investors as a safe vehicle for maintaining their principle, earning a small amount of fixed interest, and taking advantage of insurance (Kraft & Galac, 2017). Rosen (2020) observe that financial institutions typically offer better rates for accounts holding larger balances. This is used as an incentive to attract high-value clients with considerable assets. By virtue of attaining a higher interest rate, naturally, the greater the sum that is deposited, the larger the return over time. Therefore, financial institutions encourage long-term deposits not only for the client's benefit from the extended interest but because it offers more liquidity to the institution.

Globally, interest rate capping has been implemented in many ways and the variance between the allowable interest rates is relatively high. In developed economies, interest rate caps have been implemented in countries such as Spain, Finland, France, Denmark, Slovenia and Greece and many more (Ahlstedt, 2017). According to Diamond and Dybvig, (2013) on bank runs, deposit insurance, and liquidity, Spain applied the ceiling only to overdraft credit to protect housing loans while countries such as Ireland have constrained the interest rate cap to certain institutions. For instance, in Ireland it is limited to credit unions and moneylenders while in Greece it's constrained to non-banks. In France, the cap varied from 5.72 percent to 21.63 percent in 2010, whereas in Slovenia the cap for short term loans ranges from 4.53 percent to 13.2 percent (Reifner, Clerc-Renaud & Knobloch, 2010).

In Africa, many countries have legislated for interest rate caps to protect banking clientele from high interest rates charged by banks (Safavian & Zia, 2018). Such legislation is often as a result of the pressure exerted on governments by the citizenry to keep interest rates low, with the assumption that interest rate caps will result in lower and affordable interest rates for clientele (Mbua, 2017). Adeleye, et.al, (2018) on the study on financial reforms and credit growth in Nigeria postulate that Africa has had substantial continued declines of interest rate yields from 39% to 25% between 2004 and 2011. Mbua (2017) posits that the African region shows the most notable declines of its interest rate yields at "-2.5 percent between 2006 and 2011" (p. 2). By 2013, seventeen countries in Sub Saharan Africa had introduced interest rate caps, where West Africa Economic and Monetary Union lowered their interest rate ceiling by three percent, starting from the year 1997.

In Kenya, the banking sector used to register increased profitability due to high interest income. The high interest income was coming from high interest rates charged on various credit facilities. Such high interest rates increased the cost of borrowing and reduced access to credit (Irungu, 2013). This situation resulted in increased debate by the public and members of parliament to control bank interest rate charged by banks to borrowers. This led to the amendment of the Banking Act in August 2016 which imposed restrictions on the interest rates at which banks should offer loans setting a cap on the lending rate and the rate at which banks can take deposits setting a floor on the interest rate payable for deposits The Banking (amendment) Act 2016 allowed interest rates charged by commercial banks to be fixed at the Central Bank Rate (CBR) plus a speared of 4%. The intention of the Banking (amendment) Act 2016 was very clear; reduce the cost of borrowing, increase access to credit and increase the returns on savings (CBK, 2016).

1.1 Statement of the Problem

Commercial banks play very important roles in the economy, with mobilizing of deposits and provision of credit in both local and foreign currencies being core. Provision of credit facilitates production and consumption of goods and services while mobilizing deposits ensures funds are available for lending which in turn leads to economic growth (Kenya Bankers Association, 2015).

In Kenya, the Banking (amendment) Act 2016 made it compulsory for Commercial Banks to fix their lending interest rates at the Central Bank Rate (CBR) plus a spread of 4% and deposit rates at 70% of the CBR. Before the Act, there was a general feeling from the public that commercial banks overpriced their credit facilities to their consumers (Kenya Bankers Association, 2018). Interest rates capping was introduced in Kenya following concerns from the general public regarding the exorbitant cost of credit in the Country which was perceived by a sizable number of Kenyans as a hindrance to credit access. The law was thus put in practice to lower the cost of credit and enhance credit access (CBK, 2018).

The banking sector entered 2022, on a strong footing as the economy fully reopened after the COVID-19 pandemic. Kenya's economy continued to exhibit resilience underpinned by its diversity and sound macroeconomic policies. The largest proportion of the banking industry gross loans and advances were channeled to the Personal and Household, Trade, Manufacturing and Real Estate Sectors. In total, these four economic sectors accounted for 72.57 percent of gross loans in December 2022. Personal and Household, Trade and Agriculture sectors accounted for the highest number of loan accounts with a total of 98.92 percent. Trade, Manufacturing Real Estate, and Personal and Household sectors accounted for the highest value of non-performing loans by registering 70.31 percent. This was mainly due to delayed payments from public and private sectors, slow uptake of housing units and a challenging business environment. In addition, the ratio of non-performing loans declined from 14.1 percent in December 2021, to 13.9 percent in December 2022. The marginal decline was majorly attributable to improved business activities as the economy continued to recover from the COVID-19 pandemic.

Muya (2019) study examined the impact of interest rate capping on loan granting by listed commercial banks in Kenya and established that interest rate legislation affects loan portfolio performance. However, the study focused in loan granting between the years 2015 to 2017 thus presenting a contextual gap. A study by Odhiambo (2019) focused on the effect of interest rate capping on performance of commercial banks in Kenya and found that there is a significant weak positive relationship between interest rate and the overall profitability of commercial banks. However, the study focused on profitability of commercial banks but the current study focused on credit uptake. Gichuki, Mwaniki and Ogolla (2019) study investigated the interest rate capping by the central bank of Kenya on loans uptake and the findings of the study established that credit uptake increased following the introduction of the capping law. However, the study used explanatory research design and the present study used descriptive research design thus presenting a methodological gap. It was against this background the study sought to examine the effect of interest rates capping and credit uptake of commercial banks in Kenya.

1.2 Research Objectives

i. To determine the effect of lending interest rates capping on credit uptake of commercial banks in Kenya.
ii. To establish the effect of deposit interest rates capping on credit uptake of commercial banks in Kenya.
iii. To investigate the effect of interest rates spread on credit uptake of commercial banks in Kenya.
iv. To determine the moderating effect of inflation risk premium on the relationship between interest rate capping and credit uptake of commercial banks in Kenya.

1.3 Research Hypotheses

H_{01}: Lending interest rates capping has no significant effect on credit uptake of commercial banks in Kenya

H_{02}: Deposit interest rates capping has no significant effect on credit uptake of commercial banks in Kenya

H_{03}: interest rates spread has no significant effect on credit uptake of commercial banks in Kenya

H_{04}: Inflation risk premium has no significant moderating effect on the relationship between interest rate capping and credit uptake of commercial banks in Kenya.

2.1 Theoretical Framework

A good study should be anchored on theory and the current study was guided by; Irving Fisher's. Theory of Interest Rates, the Fisher Effect, Loan Pricing Theory and Loanable Funds Theory.

2.1.1 Irving Fisher's Theory of Interest Rates

The Fisher's theory of interest rate was created by Irving Fisher in 1930 yet has been progressed and moreover slammed by different researchers as well as specialists (Harrod, 1971; Fisher, 1930; Tymoigne, 2006). Generally, the idea decides the speeds of income as the piece of costs paid on cash at a specific day equivalent to money to be paid one year after the fact. On a fundamental level, it is communicated that real money can be displaced with various other kind of things. Regardless, almost, just money is exchanged between existing as well as furthermore future, the previous conflict affirms why the pace of revenue goes to times alluded to as cost of cash notwithstanding the commercial center where existing notwithstanding future cash is exchanged at that cost or expenses is depicted as currency market (Fisher, 1930). Pair with garnish of paces of revenue as well as FICO rating take-up of CBs, the Irving Fisher's Concept of Rate of loan costs will certainly be utilized to offer much better understanding of rate of interest.

2.1.2 The Fisher Effect

This theory was developed by Irving Fisher (1930) and explains the partnership in between both nominal as well as genuine rates of interest vis-à-vis rising cost of living. According to this concept, market interest rate comprises the genuine rate of interest and also the anticipated price of inflation Fisher Effect states that the genuine rate of interest equates to the nominal rate of interest minus the expected inflation rate which is denoted as;

$$(1 + i) = (1 + r)(1 + \pi)$$

Where:

i – the nominal interest rate

r – the real interest rate

π – the inflation rate

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A number of researchers have adopted Fisher Effect in their studies. For instance, in Turkey Dogan, Orun, Aydın and Afsal (2020) adopted the Fisher effect theory while carrying out a Non-parametric evaluation of the relationship between rising cost of living as well as rates of interest in the Turkish economy. According to the research, a unidirectional causal connection was spotted from rising cost of living to interest rates for the Turkish economic situation as well as also, the Fisher hypothesis was found to be legitimate for Turkey. In Maysia, Zainal Law, Md Nassir and Bakri (2020) used the theory in determining whether Malaysian Islamic cash market would successfully forecast rising cost of living in the future.

The study established that the Fisher Impact concept existed in Malaysian Islamic cash market therefore advises the performance of Islamic Cash Market to anticipate inflation's activity in the future. Nonetheless, it appeared in a weak sort of cooperation, in complete completion outcome of the research study was exceptionally advantage to plan manufacturer as the responsibility of Fisher End result in preparing for rising cost of living reflect an efficient financial policy to promote economic climate advancement as well as lasting development. The theory was thought about pertinent to the existing research because it explains the partnership between rate of interest and also expected inflation price that shows market efficiency, hence performance of commercial financial institutions.

2.1.3 Loan Pricing Theory

Loan Pricing Theory was put forward by Maike Sundmacher (2004). According to Maike Sundmacher (2004), financial institutions by and large don't continually set high paces of revenue which shows that they don't endeavor to acquire most extreme pace of revenue income while getting, was the underlying hypothesis of paces of interest decision. Ferrari, Masetti and Ren (2018) suggest that the customer type very influences the rates of loans as the customer's rate of interests and also intended use the lending quite establishes the possibility of the financial institution recovering both the principal and also the built up rate of interest payments expected from the consumer. If regardless financial institutions established interest rates that are too expensive, they might encounter unfavorable selection troubles due to the fact that risky customers are the only ones going to accept these high rates (Sichinga, 2020). The funding prices theory is extremely valuable for this study pertaining to the rates of interest topping as element affecting credit history uptake amongst commercial financial institutions in Kenya. One approach of minimizing the passion problem is using interest rates spread. This is executed by specific business financial institutions having the freedom to set their special rates of interest spread (Sheefeni, 2016). Rate of interest spread out reveals the additional expense of loaning that the banks tackle to accomplish intermediation tasks between customers as well as fund lending institutions.

2.1.4 Loanable Funds Theory

The loanable funds theory was invented by Wicksell (1951). The loanable funds theory of interest rates is an extension of the classical savings and investment theory of interest. It integrates financial aspects with the non-monetary aspects of financial savings as well as investment. According to the loanable funds theory, the interest rate is figured out by the need for as well as the supply of funds in the economy on level at which both (need and also supply) are corresponded. Therefore, it is a common demand-supply concept as related to the marketplace for loanable funds (credit scores), treating the interest rate as the cost (each time) of such funds.

The theory is based upon the assumptions that the market for loanable funds is one fully incorporated market, characterized by excellent flexibility of funds throughout the market; there

is ideal competition in the marketplace, to make sure that each debtor as well as lending institution is a 'price-taker' and also one and only one pure interest rate dominates out there at any moment and that the concept uses partial-equilibrium approach in which all elements aside from the interest rate that might affect the need or supply of loanable funds are thought to be held continuous. Simply put, it thinks that the interest rate does not communicate with various other macro variables. The theory has however been criticized by some scholars like Keynes who questioned its assumption of full employment just like classical theory. The assumption that savings and income are independent is also deficient. It has also been criticized because of the assumption that investment is only related to interest rate while marginal efficiency of capital is also a factor. The theory also assumes that the level of national income remains unchanged which is not practical since change in investment affects the income.

2.2 Empirical Review

In India, Singh (2021) insists security needs by banks minimal uptake of financial institution credit rating centers in rural facilities. The presence of limited levels of training and also perceiving as well as affirmation harmed the take-up of bank financial commitment offices for WSHGs in country workplaces in Sri Lanka (Herath, Guneratne & Sanderatne, 2016). In Cambodia, Sethykun (2011) states the non-of prosperity and security among country women gave a basic unfavorable outcome on the take-up of monetary organization record offices by their SHGs in country habitats. Diminished degrees of training and learning and similarly called well as understanding among country women gave a huge harming result on take-up of bank FICO rating positioning offices for their SHGs in country places of Pakistan (Jamal, Muhammad & Sasaki, 2015).

2.2.1 Capping Lending Interest Rates and Credit Uptake of Commercial Banks

Kavwele, Ariemba and Evusa (2018) performed a research study on the result of rate of interest covering on the economic efficiency of industrial banks in Kenya. The variables utilized for interest rate covering were Passion Incomes, Non-Interest Revenue and Rate of interest cost while the performance of industrial financial institutions was assessed by the total revenue gross as well as additionally amazing items. Details was gathered for the variables for 4 quarters of a prior to the intro of covering as well as four quarters of a financial year quickly after the presentation of covering. Various straight relapse assessment along with blended conditions T-test was utilized in the assessment because of the in the middle of between the factors. Paces of revenue besting lay to antagonistically affect the effectiveness of administration banks alongside especially from pace of revenue benefits whose unfavorable effect probably won't be formed by non-premium incomes help or the pace of revenue expenditure decline as well as additionally hence the decline in earnings.

A study by Juma and Olukoye (2018) on effect of interest rate covering policy on economic efficiency of industrial financial institutions in Kenya; situation of Equity Bank Kenya limited in Nairobi county, using detailed research study layout figured out that, credit score uptake was discovered to positively go over a less than half of the version that took place in economic execution of administration monetary foundations in Kenya. This recommended that albeit that there was a connection the instructive force of the variable was not areas of strength for excessively.

2.2.2 Capping Deposit Interest Rates and Credit Uptake of Commercial Banks

There is proof from industrialized markets that the burden of store rate covers can really raise the degree of paces of revenue. An exploration investigation of Loan Credits in Colorado by Del Mel et al. (2007) on the charge of a cost roof at first saw decreased pace of interest in any case finished a longer duration prices steadily climbed in the direction of the rates of interest cap. Using a randomized experiment, the research figured out that the typical actual go back to funding to be 5.7 per cent monthly, significantly more than the marketplace rate of interest. The research study further analyzed the heterogeneity of therapy results to discover whether missing credit rating markets or missing insurance markets are the most likely reason for the high returns. Returns are found to differ with entrepreneurial capability and with steps of various other sources of money within the house, however not to differ with risk hostility or unpredictability.

According to Cytton Investments (2019), despite locking down payment rates of interest at 70% of the CBR, the go back to deposit holders was still low with a yearly approximate return of 7.1% p.a. The Calls for covering loan fees depended on the high benefit in the monetary market because of high spreads between financing cost and furthermore initial investments costs, which in 2016 was at a high of 9.5% as per the World Bank. The deposit interest rates capping came into effect to reduce the bank margin to 4% from 9.5% and redistribute the huge interest income previously enjoyed by banks to deposit holders. A study by Safavian and Bilal (2018) because of financing costs covers on the monetary area as affirmed by CBs in Kenya uncovers, Rate of revenue covers can have far-going repercussions on the construction as well as development of business private company advance as well as initial investments.

2.2.3 Interest Rate Spread and Credit Uptake of Commercial Banks

A study by Gakpetor, Musah and Kwasi (2018) on the impact of interest rate spread on commercial banks profitability in Ghana using panel data for 24 commercial banks over a ten-year period found out that that there is a positive and likewise statistically significant organization between rate of interest spread and also financial institution productivity in Ghana. The outcome could be translated within the context of the loanable funds principle to recommend that the demand for findings exceed the supply of exact very same allowing financial institutions to costs higher passion on funding concerning deposits to increase productivity. The end results of the research study have substantial ramifications on research study on rates of interest spread as well as much more particularly on government policy to lower rate of interest spread out in Ghana.

A study by Ngetich and Wanjau (2011) in their study found out that rates of interest spread out negatively impacts credit score in financial institutions as it boosts the cost of automobile loan charged on the customers. Rules on pace of revenue significantly affect private or business properties non-execution, for such rules perceive the financing cost expanded in banks and furthermore comparatively assist in decreasing moral risks coincidental to NPAs With crediting positioning danger organization come nearer from one more area influences the worth of a banks' loan cost spread as loan cost are benchmarked versus the associated non-performing homes as well as non-performing assets is owing to high expense of vehicle advance.

2.2.4 Inflation Risk Premium and Credit Uptake of Commercial Banks

Omondi (2018) study investigated the effects of inflation on commercial banks' lending: A case of Kenya commercial bank limited. The study adopted both descriptive research design with the target population comprising of 450 KCB employees from both management and non-

management staff spread in all the 15 branches within Nairobi County and secondary data on inflation rates, new volumes of lending to creditors, loans default volumes and bank base lending rates. Primary data was analyzed using descriptive statistics and secondary data was analyzed using inferential statistics. The study found a positive relationship between inflation rate and the base lending rate charged by the bank.

Wamucii (2017) study examined the relationship between inflation on financial performance of commercial banks in Kenya. The study used descriptive research design. Secondary data was used for the study. The data that is inflation rates and financial performance (profits assets and cash flows) was collected from banks' annual reports for all the 44 commercial banks for the 10 year period 2000-2009. The study found that banks profits have the strongest clear pattern in relation to inflation indicating that profits increase as inflation decreases. However, the financial performance of commercial banks was based between 2000 and 2009.

2.3 Conceptual Framework

For this study, the independent variables include; lending interest rates capping, deposit interest rates capping, interest rate spread and inflation risk premium as the moderating effect on credit uptake of CBs in Kenya as captured in Figure 1.

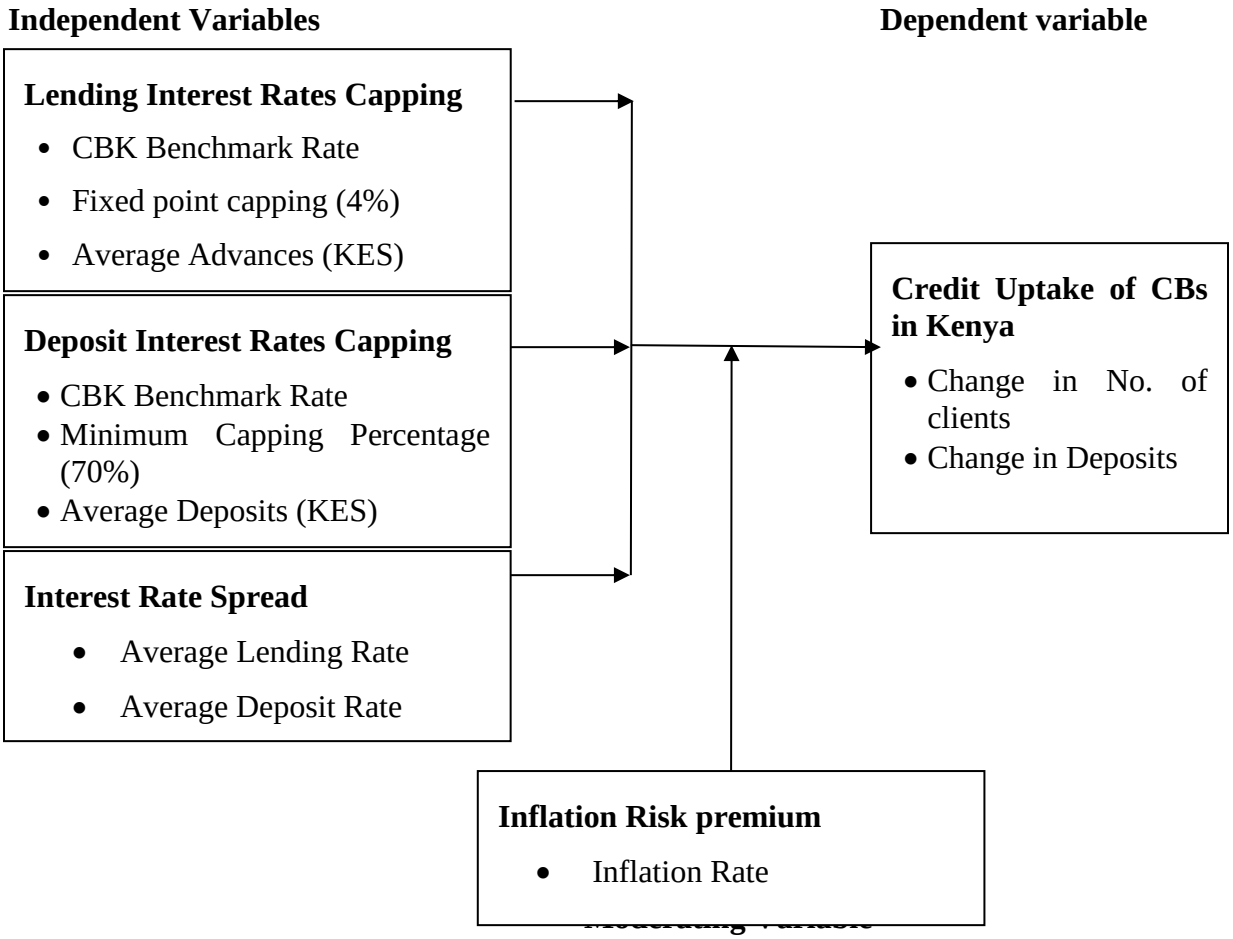

Figure 1: Conceptual Framework

Source: Researcher (2023)

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3.0 Research Methodology

This study was guided by an epistemological research philosophy which related to the development of knowledge and nature of that knowledge (Saunders, Lewis & Thornhill 2009). This study used descriptive research design. Mugenda and Mugenda (2003) indicates that descriptive research designs are conducted in communities to establish the extent of a range of issues such as health, nutrition, education, finance, crime. To be able to test and link interest rate capping to credit uptake, the researcher decided to adopt a multiple linear regression model. Letangule *et al.* (2012) used multiple regression in their study. Multiple linear regression includes uniting several predictor variables right into a solitary regression formula (Hsiao, 2014). Therefore the effect of numerous predictor variables on the reliant action will be analyzed as suggested by Jackson (2009). The target population for this study was 40 commercial banks regulated and registered by the Central Bank of Kenya. The respondents were chief finance officer from each commercial bank.

In this study all CBs in Kenya were included in the study, and considering the small number of CBs in Kenya, a census study was carried out to ensure all banks were covered. The study used both second data collection sheet as well as structured questionnaires for the functions of data collection. The surveys as information collection tool was availed to the participants for self-administering. The questionnaire was self-administered by the participants in order to gather the primary information from the respondents. Data was cleaned and checked for any inadequacies to weed off any irrelevant responses. The gathered data was processed and analyzed with the aid of statistical software called Statistical Package for Social Sciences (SPSS) and the analysis incorporated both descriptive and inferential statistics. Multiple linear regression includes uniting several predictor variables right into a solitary regression formula (Hsiao, 2014). Therefore the effect of numerous predictor variables on the reliant action will be analyzed as suggested by Jackson (2009).

The following model was used;

$Y = \beta o + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4$ e, Where,

Y = Credit Uptake of CBs in Kenya

X_1 = Lending Interest Rates Capping

X_2 = Deposit Interest Rates Capping

X_3 = Interest Rate Spread

X_4 = Inflation Risk Premium

βo = Constant

β1, β2, β3 and β4 – Coefficients

e – Error term

4.0 Findings and Discussion

The study administered 40 questionnaires to commercial banks where 31 of them were completely filled and returned. This was equivalent to a response rate of 77.5%. The results are in concurrence with Babbie (2010) who brought up that a return pace of above 70% is really great for assessment and furthermore show of the findings. Response rate is a pivotal part of an exploration study

thinking about that it gives a sign of the great nature of examination discoveries to the degree of unwavering quality that could be placed on the outcome (Ndede, Wawire & Mbewa, 2015). Though some past explores suggested that high activity cost created careful results, others are not in understanding. Demographic information results revealed majority (71.0%) of the respondents were male. The results on age of the respondents indicate that 41.9% were 31-40 years, 25.8% were 21-30 years, 19.4% were over 40 years and 12.9% were 20-30 years. Moreover, 38.7% of the respondents had undergraduate degrees, 29.0% had post graduate degrees, 22.6% had diplomas and 9.7% had certificates. Additionally, from the results it emerged that an overwhelming 61.3% of the respondents had worked in the banking sector for over 5 years, 29.0% for 3-5 years and 9.7% for less than 3 years. It was further noted that 51.6% had worked with their current employer for 3-5 years, 41.9% for over 5 years and 6.5% for less than 1 year. Finally, it was evident that while 45.2% of the respondents had worked in credit department for over 5 years, 41.9% had worked for 3-5 years and 12.9% for less than 3 years.

Descriptive Statistics on Capping Lending Interest Rates

The results of means and standard deviation as descriptive statistics of capping of interest rate were established and summarized as shown in Table 1.

Table 1: Descriptive Statistics on Capping Lending Interest Rates

Statement	Mean	Std. Dev
Lending interest rate caps have reduced credit uptake in the financial market in Kenya.	3.87	.618
Access to credit for high-risk borrowers is greater when lending interest rates capping is in place	3.77	.762
Lending interest rate capping decreases informal lending channels	3.48	.995
Lending interest rate capping results to an increase in total cost of credit through increased fees and commissions	3.89	.805
Lending interest rate caps help protect borrowers from high interest rates market	3.74	.773
High default rates on the part of borrowers can be attributed to lending interest rate capping	3.80	.749
Overall Score	**3.76**	**.783**

The results in Table 1 indicate an overall score of (M=3.76, SD=0.783), which infers that respondents agreed most of the statements provided under capping of lending interest rate. Respondents highly agreed (M=3.89, SD=.805) that lending interest rate capping results to an increase in total cost of credit through increased fees and commissions and that lending interest rate caps had reduced credit uptake in the financial market in Kenya. (M=3.87, SD=.618). A study by Odhiambo (2019) found out that profitability of commercial banks declined due to reduced interest income and a significant positive relationship was noted between lending interest rate cap and credit uptake. Matundura (2018) found out that interest rates capping had negative effect on profits at 5% level of significance and that credit uptake to new customers decreased despite an increase in the loan book of the bank which was largely attributed to an increase in the corporate segment loans.

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Regression Results and Hypothesis Testing on Capping Lending Interest Rates and Credit Uptake

Regression analysis was used to test the formulated hypothesis on capping lending interest rates and credit uptake. Table 2 gives the results of the regression model summary.

Table 2: Model Summary on Capping Lending Interest Rates and Credit Uptake

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.738[a]	.545	.529	.69921

a. Predictors: (Constant), Lending Interest Rate Capping

From Table 2, the coefficient of determination R square is 0.545, which is dissected to imply that 54.5% alteration in take-up of credit report among business banks in Kenya is only explained by garnish loaning financing costs. Juma and Olukoye (2018) sorted out that obligation take-up was situated to decidedly make sense of a substantially less than half of the variation that happened in monetary exhibition of modern monetary establishments in Kenya. The outcomes of the ANOVA were established as well as shown in Table 3.

Table 3: ANOVA on Capping Lending Interest Rates and Credit Uptake

	Sum of Squares	df	Mean Square	F	Sig.
Regression	16.986	1	16.986	34.744	.000[b]
Residual	14.178	29	.489		
Total	**31.164**	**30**			

a. Dependent Variable: Credit Uptake

b. Predictors: (Constant), Lending Interest Rate Capping

Table 3 show the value of F computed as 34.744 with p-value being 0.000 which is less than 0.05. This suggests that the general regression version of the research study was significant. The outcomes of the beta coefficients as well as relevance for evaluating the theory are as shown in Table 4.

Table 4: Regression Coefficients on Capping Lending Interest Rates and Credit Uptake

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	.198	1.170		.169	.867
Lending Interest Rate Capping	.304	.052	.738	5.894	.000

a. Dependent Variable: Credit Uptake

From Table 4, the following equation was established:

$Y=.198+.304X_1$…….(I)

From equation I, it can be inferred that when lending interest rate capping was to be held constant, credit uptake among commercial banks would be equivalent to .198. It was noted that for every

unit increase in lending interest rate capping, credit uptake among commercial banks is equivalent to 0.304 units. The first hypothesis of the study was:

H_{01}: capping of lending interest rates has no effect on credit uptake of commercial banks in Kenya

Based on the results in Table 4.5, it can be noted that capping of lending interest rates had p-value ($p<0.05$), which deduces that it was a significant variable. Thus, hypothesis H01 was rejected and the study inferred that capping of lending interest rates has significant effect on credit uptake of commercial banks in Kenya. Gakuo (2018) found that capping lending interest rates significantly increased the mortgages sanctioned and booked.

Descriptive Statistics on Capping Deposit Interest Rates

Table 5 presents the findings of descriptive statistics on capping deposit interest rate among commercial banks in Kenya.

Table 5: Descriptive Statistics on Capping Deposit Interest Rates

Statement	Mean	Std. Dev
Deposit interest rate capping results in the increase of credit uptake due to increased bank deposits available for lending	3.77	1.023
Deposit interest rate capping results in increased high cost bank deposits	3.80	.749
Deposit interest rate capping helps achieve the objective of harmonizing borrowing and lending capacities to ensure balanced economic development within the country so as to have equality in distribution of economic resources	3.64	.754
Deposit interest rate capping go beyond the law of free market economies of demand and supply thereby infusing tension within the economy between the financial system and the regulatory system which is the government thus slowing credit supply	3.67	.871
With the advent of deposit interest rate capping, commercial banks tend to lend to clients with higher collateral in order to reduce loan default rates locking out clients without collateral	3.87	.499
Commercial Banks charge more fees and commissions thereby resulting to low interest earned on the part of depositors	3.81	.709
Overall Score	**3.77**	**.722**

The results in Table 5 indicate the overall score as (M=3.77, SD=0.722). This means that majority of the respondents agreed that there was capping deposit interest rate in their institution.

Regression Results and Hypothesis Testing on Capping Deposit Interest Rates and credit Uptake

In order to test the second hypothesis of the study, regression analysis was used. Table 6 gives the findings of the model summary.

Table 6: Model Summary on Capping Deposit Interest Rates and credit Uptake

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.032[a]	.001	-.033	1.03609

a. Predictors: (Constant), Deposit Interest Rate Capping

The findings in Table 6 were that the value of R square was 0.001, which meant that 0.1% change in uptake of credit among commercial banks was explained by capping of deposit interest rate. The findings of the ANOVA are as indicated in Table 7.

Table 7: ANOVA Findings on Capping Deposit Interest Rates and credit Uptake

	Sum of Squares	df	Mean Square	F	Sig.
Regression	.033	1	.033	.031	.862[b]
Residual	31.131	29	1.073		
Total	**31.164**	**30**			

a. Dependent Variable: Credit Uptake

b. Predictors: (Constant), Capping Deposit Interest Rate

The findings in Table 7 indicate the F calculated value as 0.031 with $p>0.05$. This means the second model used in the study was not significant. The results of the beta coefficients and significance are shown in Table 8.

Table 8: Regression Coefficients on Capping Deposit Interest Rates and credit Uptake

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	6.302	2.048		3.077	.005
Capping Deposit Interest Rate	.016	.090	.032	.175	.862

a. Dependent Variable: Credit Uptake

From the results in Table 8, the following model is predicted between credit uptake and capping deposit interest rate.

$Y=6.302+.016X_2$

Where Y=credit uptake

X_2 is capping deposit interest rate

From the results, it was shown that when capping deposit interest rate was to be kept constant, credit uptake among commercial banks in Kenya would be at 6.302. A unit change in capping deposit loan fee while holding different variables steady would increment credit take-up among business banks in Kenya by 0.016 units.

The second hypothesis of the study was as follows:

H_{02}: Capping of deposit interest rates has no effect on credit uptake of commercial banks in Kenya

From the results, it can be shown that capping deposit interest rate had a p-worth of 0.862, which was above 0.05 and in this manner it was not huge. In this manner, hypothesis H02 was supported and furthermore the examination surmised that covering of store loan fees no affects FICO rating take-up of business banks in Kenya. As per Cytton Investments (2019), in spite of locking store loan fees at 70% of the CBR, the returns to deposit holders were still low with an annual approximate return of 7.1% p.a. The deposit interest rates capping came into effect to reduce the bank margin to 4% from 9.5% and redistribute the huge interest income previously enjoyed by banks to deposit holders. Safavian and Bilal (2018) identified a significant decrease in aggregate lending, a rise in non-performing finances, as well as an adjustment in structure of offering away from small and also medium business as well as toward more secure business clients. Financial institutions also changed far from offering interest on current account down payments to preserve their passion margins.

Descriptive Statistics on Interest Rates Spread

Table 9 is a summary of the descriptive statistics on interest rate spread among commercial banks in Kenya.

Table 9: Descriptive Statistics on Interest Rates Spread

	N	Min	Max	Mean	Std. Dev
Average Lending Rate	31	12.69	13.89	13.77	.362
Average Deposit Rate	31	7.23	7.93	7.22	.003

From Table 9, it can be seen that the highest average lending rate among commercial banks in Kenya stood at 13.89 with the least value being 13.89, the mean being 13.77 with a standard deviation of 0.362. This means that on average, the studied commercial banks charged an interest rate of 13.77% on lending to their customers. The results in Table 9 further indicate that the highest interest rate on deposit among commercial banks in Kenya was 7.93 with the least value being 7.23 and the mean being 7.22 with standard deviation of 0.003. This means that on average, the commercial banks charged interest rate of 7.22% on the deposit of their customers.

Thus, more interest is charged on lending as compared to deposits. Thus, the difference between interest charged on lending and deposits of 6.55% is what represents the profits generated by commercial banks from lending business. On average, there was no significant variations in both interest charged on lending and deposits among commercial banks in Kenya as shown by relatively lower values of standard deviations because of capping of the interest rate. It can thus be deduced that capping of interest rate helped in stabilization of the lending and deposit interest rate among commercial banks in Kenya.

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Regression Analysis Results

The results of the model summary on interest rate spread and credit uptake among commercial banks are indicated in Table 10.

Table 10: Model Summary on Interest Rates Spread and Credit Uptake

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.420[a]	.177	.148	.94057

a. Predictors: (Constant), Interest Rate Spread

From Table 10, the value of R square is 0.177, which was deciphered to suggest that 17.7% change in credit take-up among business banks in Kenya can be made sense of by financing costs spread. Table 11 presents the outcomes of ANOVA.

Table 11: ANOVA on Interest Rates Spread and Credit Uptake

	Sum of Squares	df	Mean Square	F	Sig.
Regression	5.508	1	5.508	6.227	.019[b]
Residual	25.655	29	.885		
Total	**31.164**	**30**			

a. Dependent Variable: Credit Uptake

b. Predictors: (Constant), Interest Rate Spread

The study established that value of F calculated was 6.227 with p-value being 0.019 which was less than 0.05. The finding means that the overall regression model of the study was significant.

Table 12: Coefficients on Interest Rates Spread and Credit Uptake

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	27.956	8.536		3.275	.003
Interest Rate Spread	1.002	.402	.420	2.495	.019

a. Dependent Variable: Credit Uptake

Based on the findings of the study, the following equation was predicted:

$Y=27.956+1.002X_3$…….. (iii)

The results imply that when all interest rate spread is to be held constant, credit uptake among commercial banks in Kenya would be at 27.956. The study developed that when all the variables are held consistent, a device modification interest rate spreads would certainly result in 1.002 system boost in uptake of debt amongst industrial financial institutions in Kenya.

The third hypothesis of the study was:

H_{03} interest rates spread has no effect on credit uptake of commercial banks in Kenya

Based on the findings, rates of interest spread had p-value of ($p< 0.05$), as well as therefore it was substantial. Therefore, the research study denied theory H03 and presumed that rates of interest

spread out has considerable effect on credit history uptake of business financial institutions in Kenya. A research by Gakpetor, Musah and Kwasi (2018) figured out that there is a favorable and statistically considerable association in between rate of interest spread and also financial institution success in Ghana. A research by Ngetich and Wanjau (2011) uncovered that rates of interest expanded detrimentally affects credit history in financial institutions as it increases the cost of loaning billed on the customers.

Moderating Effect of Inflation Risk Premium on the Relationship between Interest Rate Capping and Credit Uptake of Commercial Banks

The study sought to investigate the moderating effect of inflation risk premium on the relationship between interest rate capping and credit uptake of commercial banks in Kenya. The results of the trend analysis and regression analysis are as indicated in subsequent section.

Trend Analysis on Inflation Risk Premium. The results of the trend analysis on inflation risk premium are as indicated in Figure 2.

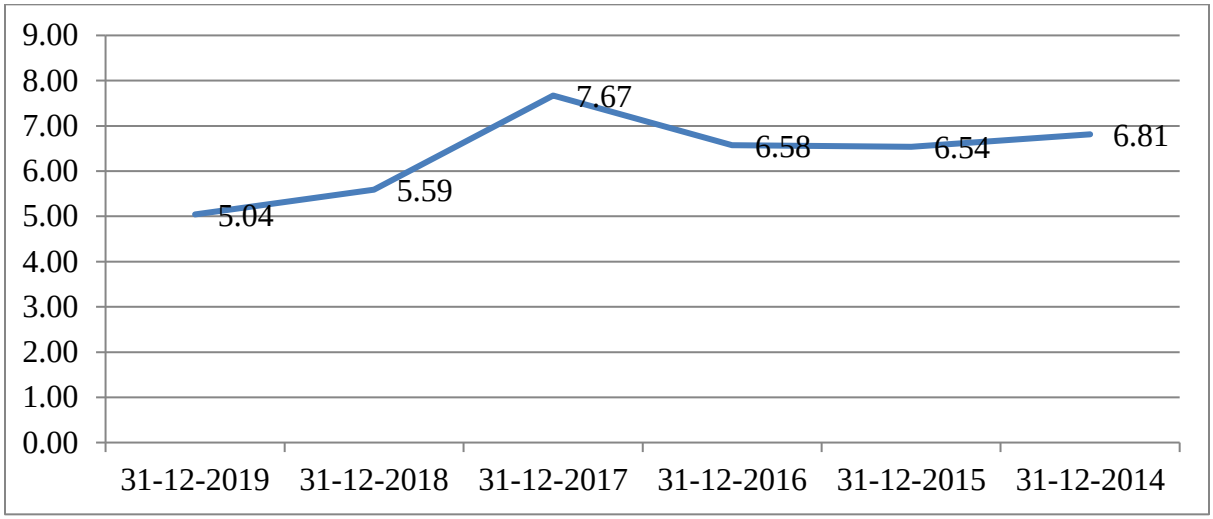

Figure 2: Trend Analysis on Inflation Risk Premium

The results in Figure 3 indicate that there was stability in inflation rate as an indicator of inflation risk premium among the studied commercial banks in Kenya.

Regression Results on Inflation Risk Premium, Interest Rate Capping and Credit Uptake

Table 13 is a breakdown of the results on regression analysis for testing the moderating effect on inflation risk premium in the link between interest rate capping and uptake of credit among commercial banks.

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Table 13: Model Summary on Inflation Risk Premium, Interest Rate Capping and Credit Uptake

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.808[a]	.652	.613	.63370	.652	16.868	3	27	.000
2	.852[b]	.726	.683	.57344	.074	6.973	1	26	.014
3	.883[c]	.780	.736	.52388	.054	6.151	1	25	.020

a. Predictors: (Constant), Interest Rate Spread, Lending Interest Rate Capping, Deposit Interest Rate Capping

b. Predictors: (Constant), Interest Rate Spread, Lending Interest Rate Capping, Deposit Interest Rate Capping, Inflation Risk Premium

c. Predictors: (Constant), Interest Rate Spread, Lending Interest Rate Capping, Deposit Interest Rate Capping, Inflation Risk Premium, Interaction Term

Table 13 gives the results of three models. Model 1 is used to gauge the connection between loan cost covering and take-up of credit among business banks in Kenya. From the discoveries, the worth of R square was 0.652, and that implies that 65.2% change in take-up of credit among business banks in Kenya is made sense of by loan cost capping. Model 2 was after inflation risk premium was introduced. Note that after introduction of inflation risk premium in model 2, there was a change in R square by .074, which represents the moderating effect of inflation risk premium in the model. Model 3 was as a result of the introduction of the interaction term, where there was still a change in R square by .054. Thus, model 2 and 3 indicate that inflation risk premium is a moderator variable.

Table 14: Analysis of Variance on Inflation Risk Premium, Interest Rate Capping and Credit Uptake

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20.321	3	6.774	16.868	.000[b]
	Residual	10.843	27	.402		
	Total	**31.164**	**30**			
2	Regression	22.614	4	5.654	17.193	.000[c]
	Residual	8.550	26	.329		
	Total	**31.164**	**30**			
3	Regression	24.303	5	4.861	17.710	.000[d]
	Residual	6.861	25	.274		
	Total	**31.164**	**30**			

a. Dependent Variable: Credit Uptake

b. Predictors: (Constant), Interest Rate Spread, Lending Interest Rate Capping, Deposit Interest Rate Capping

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c. Predictors: (Constant), Interest Rate Spread, Lending Interest Rate Capping, Deposit Interest Rate Capping, Inflation Risk Premium

d. Predictors: (Constant), Interest Rate Spread, Lending Interest Rate Capping, Deposit Interest Rate Capping, Inflation Risk Premium, Interaction Term

The results in Table 14 show that the three models 1, 2 and 3 had F calculated values of 16.868, 17.193 and 17.710 respectively, which were higher than the tabulated F values. The p-values were also less than the critical p-value of 0.05. This implies that they were significant. The results of the regression beta coefficients were established and presented as shown in Table 15.

Table 15: Regression Beta Coefficients and Significance on Inflation Risk Premium, Interest Rate Capping and Credit Uptake

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17.444	6.429		2.713	.011
	Lending Interest Rate Capping	.286	.047	.695	6.065	.000
	Deposit Interest Rate Capping	-.015	.056	-.031	-.267	.791
	Interest Rate Spread	-.795	.277	-.334	-2.875	.008
2	(Constant)	19.051	5.850		3.257	.003
	Lending Interest Rate Capping	.278	.043	.675	6.495	.000
	Deposit Interest Rate Capping	-.030	.051	-.061	-.586	.563
	Interest Rate Spread	-.700	.253	-.294	-2.768	.010
	Inflation Risk Premium	-.493	.187	-.278	-2.641	.014
3	(Constant)	27.103	6.253		4.334	.000
	Lending Interest Rate Capping	.271	.039	.657	6.901	.000
	Deposit Interest Rate Capping	.074	.063	.152	1.183	.248
	Interest Rate Spread	-.895	.244	-.376	-3.669	.001
	Inflation Risk Premium	-.354	.180	-.199	-1.969	.060
	Interaction Term	-.016	.007	-.334	-2.480	.020

a. Dependent Variable: Credit Uptake

Table 4.16 results into the following three predicted models:

$Y=17.444+.286X_1-.015X_2-.795X_3$…… (iv)

$Y=19.051+.278X_1-.030X_2-.700\ X_3-.493X_4$…… (v)

$Y=27.103+.271X_1+.074\ X_2-.895X_3-.354X_4-.016X_5$…… (vi)

Where

Y = Credit Uptake of CBs in Kenya

X_1 = Lending Interest Rates Capping

X_2 = Deposit Interest Rates Capping

X_3 = Interest Rate Spread

X_4 = Inflation Risk Premium

X_4 = Interaction Term (Interest rate capping*inflation risk premium)

The results in Model 1 indicate while lending interest rate capping and interest rate spread were significant ($p<0.05$), deposit interest rate capping was insignificant ($p>0.05$). Note that deposit interest rate capping and interest rate spread in model 1 are all negative, implying that they were inversely related with uptake of credit among commercial banks in Kenya.

Model 2 presents the results when inflation risk premium as a moderator variable was introduced. From the findings, lending interest rate capping and interest rate spread ($p<0.05$) were still significant even after introduction of the moderators variable in the model. Note that inflation risk premium has a p-value less than 0.05, thus it was significant.

Model 3 is the result after the interaction term was presented in the model. From the discoveries, when the association term was presented in the model close by expansion risk premium, loaning financing cost covering and loan fee spread ($p<0.05$) were as yet huge. Moreover, the cooperation term itself had p-worth of under 0.05, it was influential for infer that it.

The fourth hypothesis was as follows:

H_{04}: Inflation risk premium has no moderating effect on the relationship between interest rate capping and credit uptake of commercial banks in Kenya

Based on the results of model 2 and model 3, where the p-values for inflation risk premium and the interaction term are less than 0.05 respectively, the fourth hypothesis H_{04} was rejected. Thus, the research study presumed that rising cost of living threat costs has considerable moderating impact on the connection between interest rate topping and also credit history uptake of business financial institutions in Kenya.

5.0 Conclusion

Based on the findings the study concludes that capping of lending interest rates has significant effect on credit uptake of commercial banks in Kenya. The study also concludes that capping of deposit interest rates has no significant effect on credit uptake of commercial banks in Kenya. Thirdly, the study concludes that interest rates spread significantly affects credit uptake of commercial banks in Kenya. The last hypothesis of the study was that H_{04}: inflation risk premium has no moderating effect on the relationship between interest rate capping and credit uptake of commercial banks in Kenya. From regression results, both inflation risk premium and the interaction term had beta coefficients that had p-values less than 0.05. Therefore, the study rejected hypothesis H_{04} and thus concluded that inflation risk premium has significant moderating effect on the relationship between interest rate capping and credit uptake of commercial banks in Kenya.

6.0 Recommendation

The study recommends that the policy makers will need to keep a closer eye on banking sector as a whole and how it continues to operate in the controlled environment. The fact that there has been clamor by the same banks to repeal banking act which brought into force the interest rate control

may mean that the anticipation that this may have been a short term measure may have led to the decision by some banks not to change their business strategy. The study also recommends that the government should evaluate whether the law on interest rate capping has helped it achieve its target growth. The policy makers should come up with policies that will cushion banks against the adverse effect of interest rate capping. Based on the findings and conclusions, this study recommends that the government of Kenya should put in place interventions that monitor interest rates and inflation and maintain it at reasonable levels to enhance borrower's uptake in commercial banks in Kenya. The Central bank of Kenya should employ monetary policies to ensure sustained money supply in the economy. This will positively influence uptake of credit facilities by borrowers. In periods of interest rate capping, Commercial banks performance is greatly affected by uptake of credit facilities.

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