Bank Lending Rates and Nonperforming Loans of Listed Commercial Banks in Kenya

Loice Koskei ᵃ* and Daniel Samoei ᵇ

ᵃ Koitaleel Samoei University College (A Constituent College of the University of Nairobi), Kenya.
ᵇ Moi University, Kenya.

Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

Original Research Article

ABSTRACT

The rise in non-performing loans in Kenyan commercial banks over the past ten years has created instability in the financial industry. Due to their impact on borrowers' ability to repay the loans, high-interest rates are a contributing factor to non-performing loans. The interest rate on loans has an implicit cost that is inherent to bank credit and has an impact on loan defaults. In this sense, a large percentage of non-performing loans (NPLs) in Kenya's Commercial banks has continued to impede economic expansion due to high default rates experienced by many banks making them unable to advance new loans. The study investigated the influence of bank lending rates on nonperforming loans in listed commercial banks in Kenya using secondary monthly data from November 2019 when the interest capping was repelled to September 2023. Secondary data was obtained from the Central Bank of Kenya Monthly Statistical Bulletin. Inferential statistics using regression analysis was utilized to analyze the data. The regression model results showed that bank lending rates had a positive and statistically significant effect on non-performing loans of listed commercial banks in Kenya as illustrated by a P-value of 0.0000000054, which is less than 0.05. The results implied that lending rates do influence non-performing

---

Corresponding author: E-mail: koskei@ksu.ac.ke;

loans of listed commercial banks in Kenya as measured by the gross non-performing loans ratio. Policymakers in Kenya need to control lending rates to reduce the rising rates of non-performing loans.

1. INTRODUCTION

Many countries' aggregate NPLs increased dramatically during the global financial crisis in 2008, compared to the previous period, which had relatively smaller numbers [1]. Before the global financial crisis, Basel II was implemented in 2004 to increase risk management in banks. However, when the financial crisis hit, several nations had yet to adopt it. A nonperforming loan (NPL) crisis prohibits banks from allocating credit in an economy. This is because, as banks seek to cover the risks of lending, their profitability declines, income falls, provisioning rises, and expenses rise. NPLs can harm a country's growth prospects. Banks with a large number of NPLs have less capacity to issue fresh credit [2]. Banking systems with large NPLs have limited profitability and growth.

In the banking industry, non-performing loans (NPLs) are a vital indicator of a bank's loan portfolio's credit quality. A country's banking system stability can be determined by looking at the entire credit quality of the loans held by the banking sector. Thus, non-performing loans (NPLs) are an important indicator of a financial system's exposure to credit risk. Since NPL levels have an impact on banks' capital provisions, their capacity to extend new loans, and their overall performance, they are much more significant [1]. The increase in non-performing loans (NPLs) reduces the efficiency of a financial system and may cause the monetary policy to be implemented more slowly. Banks should strive to maintain a low non-performing loan (NPL) ratio to sustain growth and stability [3]. For risk management, both banks and regulators tasked with overseeing bank stability must have a thorough grasp of the primary variables affecting non-performing loans (NPLs) as well as an analysis of how sensitive these loans are to lending rates.

The percentage of non-performing loans (NPLs) in the US decreased from 5% in 2009 to 0.9% in 2019 following the global financial crisis. The Covid-19 epidemic was mostly to blame for the minor increase in the NPL ratio to 1.1% in 2020; however, in 2021, the ratio dropped to 0.9% [4].

Conversely, the prevalence of non-performing loans (NPLs) has increased over time in Asian and African nations. China's GDP fell to 1.51% in 2017, but it has since increased gradually to about 3% in 2021 (Statista, 2022). India's non-performing loan (NPL) increased from 2.3 in 2011 to 7.3 in 2021, per CEIC Data (CEIC). South Africa recorded a low of 2.8 in 2017 and a high of 5.2% in 2021, the pattern for African nations was essentially the same [5]. Government inefficiencies and inadequate policies have been primarily blamed for the increase in non-performing loans (NPLs) (Giammanco, Gitto & Ofria, 2022).

Throughout the COVID-19 period, the banking industry in East Africa as a whole encountered several difficulties. During the year 2011–2022, a sample of the leading Kenyan banks revealed an average 8% increase in non-performing loans (NPLs). The rise of troublesome loans led to a decline in ROE, which in turn affected Kenya's banking industry credit rating [6].

The study endeavors to fill the gap in the literature by finding out the influence of lending rates on non-performing loans of listed commercial banks in Kenya after the interest rate capping was repelled in November 2019.

1.1 Statement of the Problem

Non-performing loan rates are still rising in Kenya despite policy changes implemented by CBK in 2016 that established minimum requirements for core capital, capital adequacy, liquidity management, asset risk classification, and provisioning. The year 2018 saw the release of a guidance note by CBK regarding the application of IFRS 9, which mandated that banks record credit losses consistently and adjust the amount recorded at every reporting date to account for variations in the credit risk of financial instruments. NPLs, however, have been increasing dramatically in Kenya over time. The latest bank supervision annual report of 2022 from the Central Bank of Kenya has highlighted the rising amount of non-performing loans in the banking industry. A 12.1% increase from Kshs
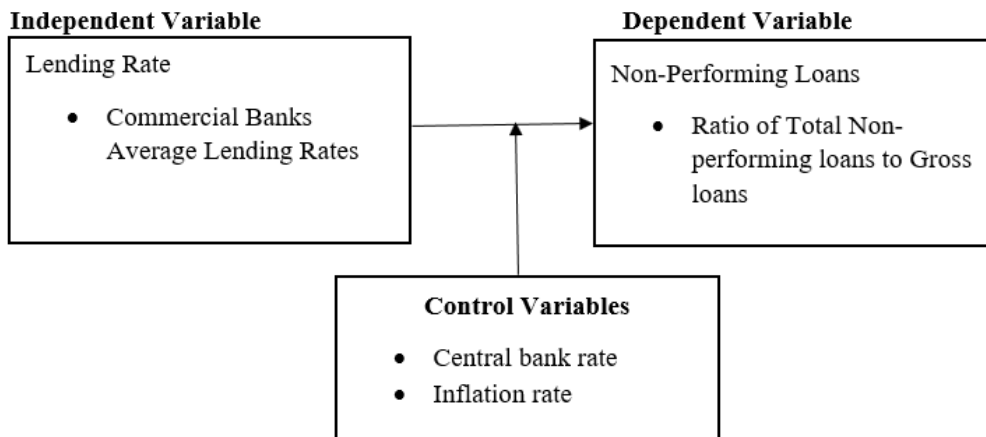
Chart 1. Conceptual framework

172.459 billion recorded in December 2021, net non-performing loans now total an alarming Kshs 193.368 billion. The asset quality, measured by gross nonperforming loans to gross loans ratio deteriorated from 14.5 percent in June 2023, to 15.0 percent in September 2023. This was due to a higher increase in gross NPLs of 6.0 percent compared to the increase in gross loans of 3.1 percent (CBK Credit Survey Report, 2023).

The Kenya Bankers' industry report (2023) pointed out that raising the monetary policy rate has contributed to an increase in lending rates, negatively impacting asset quality through credit channels, and eroding the value of interest-sensitive assets such as bonds held for sale/trading.

1.2 Objective of the Study

To determine the influence of bank lending rates on nonperforming loans of listed commercial banks in Kenya.

2. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Information asymmetry theory

Asymmetric information predominates in transnational relationships when one party has greater knowledge than the other, according to the theory of information asymmetry. Scholars Brennan, Kirwan, and Redmond (2016) argue that the literature on information asymmetry from the perspective of financial decision-making addresses the impact of decisions made with varying information and diverse stakeholders. Because lenders lack sufficient information on their borrowers, they are unable to distinguish between creditworthy clients and those who are not, so they assume a significant risk when extending credit facilities to borrowers in financial institutions. According to the "lemon Principle," information asymmetries also cause adverse selection. Akerlof initially described the issues surrounding moral hazard in 1970. Using this theory, the study demonstrated how interest rates lead to non-performing loans (NPLs). If the lenders are unable to differentiate between creditworthy borrowers and those who are not, they will charge all of them a standard interest rate that reflects their combined experience. However, by raising the interest rate, some borrowers are instantly removed from the borrowing pool. This separates the borrowers who qualify for credit from those who do not. The high-quality ones due to unfavorable selection dislodge the low-quality debtors in this instance.

2.1.2 Loan pricing theory

The loan pricing theory suggests that banks should not be expected to arbitrarily determine the interest rate for a given transaction; that is, they should not aim to maximize interest income while making loans (Mudzingwa, 2013). Since only high-risk consumers would be ready to apply for loans with high interest rates, banks may experience adverse selection issues when interest rates are very high. However, when these borrowers get the loans they were hoping for, they are more likely to develop moral hazard behaviors forcing them to engage in activities that carry a bigger risk but offer a higher chance of profiting from the higher interest rates (Chodechai, 2004). Interest rate spread is one of the factors that the loan pricing theory considers

important when analyzing non-performing loans (NPLs) among Kenyan commercial banks. To lessen the interest burden on their loans, the banks, according to the theory, should set up systems for identifying and realizing the possible risk the borrower bears and, if they try to charge a lower interest rate, for doing so. Spreading interest rates is one method of lowering the cost of borrowing money (IRS). The ability of individual CBs to determine their unique interest rate spread makes this conceivable (Sheefeni, 2016).

2.2 Empirical Review

Maivald & and Teplý [7] investigated the effect of low interest rates on bank non-performing loans. They used the GMM to look at a sample of 823 banks from 2011 to 2017 that were only allowed to operate in the Eurozone, Denmark, Japan, Sweden, and Switzerland. In the variable that controls for the below-zero monetary interest rates under which the NPL grows, they discovered a significant one-year delayed effect on the NPL ratio. They did not, therefore, disprove their hypothesis. Additionally, they found that the interbank 3-month interest rate has a marginally significant self-correcting effect. The NPL ratio moved in tandem with the prevailing year's interbank interest rate; however, the movement in the opposite direction was corrected by the interbank interest rate lag, which had a smaller effect.

Mwenda [8] looked into how lending interest rates affected Kenyan commercial banks' financial performance. The research design employed was the descriptive approach. The study employed a census, incorporating all 43 Kenyan Commercial Banks registered with the CBK. For this study, secondary data were utilized. Models of multiple regression analysis were employed to evaluate the gathered data. Given that lending rates are a significant factor in determining interest revenue, the findings indicated that lending rates had a positive effect on financial institution performance.

Kavwele, Ariemba, and Evusa (2018) evaluated the moderating impact of CBK rates on the relationship between interest rates and non-performing loans (NPL) in commercial banks. Four quarters of the fiscal year before the implementation of capping and four quarters of the fiscal year following the implementation of capping were used to collect data for the variables. The analysis used a paired sample T-test to assess the relationship between the

variables. The findings showed that interest rate capping significantly hurts Kenyan commercial banks' performance, especially when it comes to interest earnings. A drop in interest costs or an increase in non-interest income, which lowers profits, cannot offset this harm. The study also discovered that the relationship between the rate of interest and NPL Performance in commercial banks is significantly moderated by CBK rates.

Ngondo (2018) evaluated the impact of Kenyan commercial banks' CBK rates on loan performance. Secondary data was collected for all commercial banks licensed between 2013 and 2017. Nonetheless, complete data was acquired for 35 commercial banks, since many institutions lacked information for certain years during the research period. The study found a significant positive association between NPLs and loan rates. Furthermore, the relationship between interest rates and loan performance was moderated by central bank rates. However, the study was unable to demonstrate the moderating impact of CBK rates.

The effects of bank lending rates and non-performing loans of Kenya's commercial banks were examined by Kinyoti and Koori, [9]. Thus, the analysis concluded that bank lending rates, as expressed in terms of the weighted average rates of commercial banks, significantly affect commercial banks. Accordingly, a rise in bank lending rates increased Kenya's commercial banks' non-performing loans (NPLs). The study also established that, in Kenyan commercial banks, CBR significantly modified the relationship between BLR and NPLs. This suggested that the relationship between bank lending rates and non-performing loans in Kenyan commercial banks is significantly impacted by increases in central bank rates. Research findings indicated that the non-performing loans (NPLs) of commercial banks in Kenya were positively impacted by bank lending rates. It is therefore imperative that the management of the commercial banks devise appropriate plans to raise lending interest rates to boost loan profitability. There is a bigger difference between the rate the bank charges its customers and the federal funds rate, which contributes to the rise in loan profitability. These conditions improve the company's and end customers' demand for loans, which boosts bank profitability. When interest rates rise, the difference between long-term and short-term rates also rises because short-term rates grow more slowly.

Baradine (2018) investigated the relationship between non-performing loans and lending rates in Malaysian banks. Causal research was utilized for the analysis, which involved gathering data from 142 Malaysian banks. According to the study, credit rates are inherent costs borne by customers when they take out bank credit, which leads to credit defaults. The research moreover demonstrated that the quantity of non-performing loans in these commercial banks hindered economic expansion to the point that the majority of clients declined to repay credit. The results of the 18 analyses showed that there is an unbalanced association in the near term between lending rates and non-performing loans, but a symmetric relationship over the long term.

3. METHODOLOGY

A causal research design was employed by the study because of its ability to describe the cause-and-effect relationships between variables. Secondary monthly data sets for average bank lending rates and gross non-performing loans ratio were obtained from the banking supervision reports held by the Central Bank of Kenya (CBK) as well as the Kenya National Bureau of Statistics (KNBS). The data used is from November 2019 when the capping on interest rates was repelled in Kenya to October 2023 for listed commercial banks resulting in 98 observations. In data analysis, inferential statistics were utilized using regression analysis, and all statistical analysis was done using advanced Microsoft Excel.

The following regression model for the study is;

$$NPL_t = \beta_0 + \beta_1 LBR_t + \beta_2 CBR_t + \beta_3 INF_t + \varepsilon_t$$

Where:

NPL_t = Non-performing loans over time t
LBR_t = Bank lending rates over time t
CBR_t = Central bank rate over time t
INF_t = Inflation rate over time t
β_0, β_1 = Beta Coefficients
ε_t = Error term

4. RESULTS AND FINDINGS

Table 1 results present the model summary. The R-squared for bank lending rate and non-performing loans is 55%. This implies that the independent variable (Bank lending rates) explains 55% of the dependent variable (non-performing loans).

Table 1. Model summary

Regression Statistics	
Multiple R	0.745316
R Square	0.555497
Adjusted R Square	0.525863
Standard Error	0.520565
Observations	49

Table 2 results of analysis of variance exhibited that there was a statistically significant difference between bank lending rate and the non-performing loans of listed commercial banks in Kenya as indicated by (F (3, 48) = 18.74552, with a P-value of 0.00000000492526 which is less than 0.05.

The regression model results in Table 3 indicated that bank lending rates had a positive and statistically significant effect on non-performing loans of listed commercial banks in Kenya as illustrated by a P-value of 0.0000000054, which is less than 0.05. The results implied that lending rates do influence non-performing loans of listed commercial banks in Kenya as measured by the gross non-performing loans ratio. The study evaluated the moderating effect of the central bank rate and inflation rate. The central bank rate had a negative and statistically significant effect on non-performing loans as demonstrated by a P-value of 0.0000000596, which is less than 0.05. The regression results inferred that the central bank rate has a significant effect on the link between lending rates and non-performing loans of listed commercial banks in Kenya. The inflation rate, which was also used in the study as a control variable, had a positive and statistically insignificant effect on non-performing loans of listed commercial banks in Kenya as exhibited by a P-value of 0.242251, which is more than 0.05. The results implied that the inflation rate does not influence the link between the lending rates and non-performing loans of listed commercial banks in Kenya.

5. DISCUSSION OF FINDINGS

The findings from this study are consistent with the work of Kinyoti and Koori, [9] who analyzed the effect of bank lending rates on non-performing loans of commercial banks in Kenya for the period 2016 to 2020. Kinyoti and Koori's findings from the inferential statistics found that bank lending rates as measured in terms of Commercial banks' weighted average rates, have a significant and positive effect on non-performing loans of commercial banks in Kenya.

Table 2. ANOVA results

ANOVA					
	df	SS	MS	F	Significance F
Regression	3	15.23942	5.079808	18.74552	4.92526E-08
Residual	45	12.19445	0.270988		
Total	**48**	**27.43388**			

Table 3. Regression coefficients

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-12.4343	3.850126	-3.22959	0.002318	-20.18886573	-4.67976
Lending rate	2.755026	0.423023	6.512705	5.4E-08	1.9030135	3.607039
Central bank rate	-1.06363	0.183054	-5.81046	5.96E-07	-1.43231457	-0.69494
Inflation rate	0.067856	0.057264	1.184967	0.242251	-0.047480053	0.183193

The findings of this study are in line with the work of Maina [10] who used a descriptive research approach to explore whether bank lending rates affect Kenyan commercial banks' NPLs. Using Primary data Maina discovered that bank lending rates had an impact on NPLs in Kenyan commercial banks. As a result, the study concluded that there is a positive and significant relationship between bank lending rates and non-performing loans [11].

6. CONCLUSION

Commercial banks play an important role in a country's economy since their productive investment ensures the country's economic viability. As a result, banking sector stability is critical for economic development and resilience to financial crises. The bank's stability and viability are jeopardized by rising credit risk as a result of rising NPLs. Thus, monitoring NPLs is critical for both the efficacy of individual banks and the financial development of the economy.

The study examined the influence of bank lending rates on nonperforming loans in Listed Commercial Banks in Kenya. The regression model results pointed out that bank lending rates had a positive and statistically significant effect on non-performing loans of listed commercial banks in Kenya. The results implied that lending rates do influence non-performing loans of listed commercial banks in Kenya as measured by the gross non-performing loans ratio.

The central bank rate had a negative and statistically significant effect on non-performing loans. The regression results inferred that the central bank rate has a significant effect on the link between lending rates and non-performing loans of listed commercial banks in Kenya. The inflation rate, which was also used in the study as a control variable, had a positive and statistically insignificant effect on non-performing loans of listed commercial banks in Kenya. The results implied that the inflation rate does not influence the link between the lending rates and non-performing loans of listed commercial banks in Kenya.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Ozili P. Non-performing loans and financial development: New evidence. The Journal of Risk Finance, University of Essex; 2019.
2. Baudino P, Orlando J, Zamil R. NPL Identification and Measurement: A Cross Country Comparison Bank for International Settlements, Financial Stability Institute, FSI Insights; 2017.
3. Kuzucu N, Kuzucu S. What drives non-performing loans? Evidence from emerging and advanced economies during pre- and post-global financial crisis. Emerging Markets Finance and Trade. 2019;55(8):1694 – 1708.
4. Statista search department. Non-performing loan ratios in Europe; 2022. Accessed On 2nd December 2023. Available:https://www.statista.com/statistics/

5. CEIC Data. Non-performing loan ratios; 2022.
    Available:https://www.statista.ceicdata.com/en/non-performing-loans-ratio
    Accessed On 31st November 2023.

6. Central Bank of Kenya. Bank Supervision Annual Report; 2022.
    Available:www.centralbank.go.ke on 2nd December 2023

7. Maivald M, Teplý P. The impact of low-interest rates on banks' non-performing loans. FFA Working Paper 2/2020, FFA, University of Economics, Prague; 2020.

8. Mwenda J. Effect of loan portfolio characteristics on the level of nonperforming loans for savings and credit Co-Operative Societies in Kirinyaga County Kenya. International Journal of Finance and Banking Research. 2017;3 (5):58-69.

9. Kinyoti ER, Koori J. Bank lending rates and non-performing loans of Commercial Banks in Kenya, International Journal of Business Management & Finance Serial Publishers. 2022;2(1):190-202,

10. Maina AN. Effect of lending practices on financial performance of Commercial Banks in Kenya: A Survey of Selected Banks within Nairobi; 2016.
    Available:http://erepo.usiu.ac.ke

11. Ngondo YG. The effect of non-performing loans on the size of the loan portfolio in commercial banks in Kenya; 2015.