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*Does Mobile based Lending affect Loan Performance?
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Does Mobile based Lending affect Loan Performance? Evidence from Commercial Banks in Kenya

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Abstract

The push for financial inclusivity has led to the introduction of digital lending by financial institutions. Some of popular digital lending channels include Mshwari by NCBA bank, KCB-Mpesa by Kenya commercial bank, Pesa-pap by Family bank and Timiza by Absa bank. Since the introduction of Mpesa services in Kenya in 2012, there has been an increase in delinquency. The foremost aims of this review were to examine the impact loan appraisal process, cost of loans, loan disbursements and loan repayment period on loan performance of Kenyan banks. Technology acceptance theory, financial intermediation preposition and information asymmetry theory guided this analysis. The research philosophy of positivism, which emphasizes objective measurement and observation to acquire knowledge was adopted in this analysis. The study examined a population of 38 commercial banks operating in Kenya by year 2023 using a descriptive research approach. A purposive sampling method was employed to acquire a sample size of 76. Questionnaires are employed to collect primary data. The analysis mainly targeted credit staff working for the various commercial institutions. Descriptive statistics such as measure of central tendency (mainly mean) and variability (express by statistical dispersion) were used to analyze the data. Inferential statistics such as regression and hypothesis testing were used to show the relationship between mobile-based lending and loan performance of commercial banks in Kenya. The findings demonstrated that loan appraisal process, cost of loan, loan disbursement, and loan repayment period have a Substantial impact on loan performance of Kenyan banks. The study highlighted that proper loan appraisal, low cost of loans, managing disbursements and favorable repayment term will help improve loan performance. The analysis on mobile based lending and loan performance of Kenyan banks has contributed to theory, policy and practice. It enhances theoretical understanding of the relationship between mobile based loans and loan performance through insights into how technology has eased lending process and enhanced financial inclusivity. In practice, the study has given guidance to lenders on how various factors of mobile lending have influenced loan performance. The study has implications for policy formulation, as technology is being embraced by commercial banks, and drive for financial inclusivity there is need to maintain a sound lending process that protects investors and other stakeholders. The policies should ensure they offer an enabling environment for financial innovation and still ensure loan performance.

Keywords: *Mobile based lending, Loan appraisal process, Cost of loan, Loan disbursement, Loan repayment term, and non-performing loans.*

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Introduction

Since the introduction of mobile money services such as Mpesa by Safaricom in 2007, it led to led to more innovation in Fintech. Some of the innovations included digital lending where subscribers would access short-term loans via their mobile phone. The first digital loan was done through Mpesa in 2012, and since then other digital lenders come into play including banks through their banking applications. Some of the lending services integrated with mpesa include KCB mpesa by KCB, Mshwari by NCBA bank, Eazzy App by Equity, Timiza App by Absa Bank and Pesapap by Family Bank. According to CBK supervisory report 2023, only 22 digital lenders were licensed excluding banks.

Some of the factors influencing loan performance in Kenyan Commercial banks are loan appraisal process, cost of loans, loan disbursement and loan repayment terms. Appraisal process is step taken by the lender to determine borrower's ability to repay a loan. This includes assessing sources of income, age, gearing ratio, security offered, credit history and purpose of the loan. Poor credit assessment and credit monitoring lead to high NPLs (Asfaw et al, 2016). Cost of the loans include processing fees, interest rates and insurance. These costs influence loan repayment. Interest rates affect the capability of customers to meet credit obligations (Sheefeni, 2016). Another study by Mwangi (2014) shows a powerful positive correlation between interest rates and levels of NPLs. Loan disbursements in terms of volumes, timeliness and after disbursement monitoring influence loan repayment. Excessive lending and high costs had a great effect on losses of loans in commercial banks in the USA (Sinkey& Greewalt, 1991). Loan repayment terms including maturity period and grace period influence loan performance. A longer repayment period means the loanee is exposed to financial struggles and hence unable to repay. In a study by Abimbola, (2021), they found that loan maturity and NPLs are positively correlated.

Non-Performing Loans

Globally, North America has maintained the lowest proportion of non-performing loans (NPLs) compared to all other regions. As of 2018, the NPL ratio in North America was just 0.7% (Eyraud et al., 2021). In the United States, the ratio of NPLs to total loans stood at 0.8% in 2021, continuing a downward trend from 5% in 2009 during the global financial crisis. Equally, Canada had a decrease from 1.3% in 2009 to 0.4% in 2021 (World Bank, 2022). Europe and Central Asia saw a

decline in NPL ratio in similar periods. For example, France managed to reduce its NPL ratio from 4% in 2009 to 2.1% in 2021 (World Bank, 2022). In Asia, China saw a slight regression in its NPL ratio from 1.1% in 2009 to 1.7% in 2021 (Eyraud et al., 2021). Latin America experienced an NPL ratio of 2.5% in 2018, while the Middle East and North Africa had a significantly higher ratio of 5.4%. South Asia recorded an even higher figure of 8.4% in the same year. (Eyraud et al., 2021). In Sub-Saharan Africa, reports showed the highest regional NPL ratio globally at 11.7% as of 2018, the only region with a double-digit percentage. These extreme levels are largely attributed to exposure to macroeconomic instability and the occurrence of lower-income and lower-middle-income countries in the region (Eyraud et al., 2021). South Africa decreased its NPL ratio from 6.0% in 2009 to 4.7% in 2021 (World Bank, 2021).

Domestically, the NPL ratio rose from 8% in 2009 to 13.1% in 2021 (World Bank, 2021). By June 2022, the total value of outstanding NPLs reached a record KES 514.4 billion. According to the CBK (2022), sectors most affected included manufacturing, trade, real estate, and agriculture. The rise in NPLs was largely due to unfavorable macroeconomic conditions and payment delays. Additionally, mobile lending significantly contributed to the increase. The Kenya Bankers Association (KBA) reported in 2022 that 67.83% of customers preferred mobile banking, valuing its efficiency over traditional in-branch services. (KBA, 2022; CBK, 2022).

Research Problem

Between 2016 and 2021, the ratio of NPLs to total loans followed an upward trajectory, peaking in 2020 before slightly declining in 2021. Specifically, the NPL ratio was 8.59% in 2016, 9.95% in 2017, 12.03% in 2018, 12.01% in 2019, 14.14% in 2020, and decreased to 13.14% in 2021 (World Bank, 2023). The decline between 2020 and 2021 has been attributed to post-pandemic economic recovery efforts. According to CBK's 2021 report, the absolute value of NPLs rose from KES 436 billion in 2020 to KES 460 billion in 2021—a 5.5% increase. Key sectors contributing to 68.62% of the total NPLs included trade, finance, manufacturing, personal and household lending, and agriculture.

Several previous studies have explored digital lending and NPLs but have left notable research gaps. Murunga (2017) surveyed mobile lending and NPLs among banks in Nakuru town, focusing

only on credit officers in that location, thereby creating a contextual gap. The study emphasized loan processes—application, appraisal, documentation, disbursement, and monitoring—while excluding other influencing factors such as loan costs and repayment terms, which introduces a methodological gap. Muriuki (2021) examined how digital lending affects the volume of NPLs in Kenyan banks, using only mobile lending as the independent variable and relying on historical data. This approach resulted in both methodological and conceptual gaps. Similarly, Siabei (2019) focused on “the impact of digital lending on the financial performance of microfinance institutions,” using profitability as the key performance metric—therefore limiting its applicability to commercial banks and leading to contextual and conceptual gaps.

Objectives of the study

- i. To establish the impact of the loan appraisal process on loans performance of commercial banks in Kenya
- ii. To examine the impact of the cost of the loan on loans performance of commercial banks in Kenya
- iii. To examine the impact of loans disbursed on loans performance of commercial banks in Kenya
- iv. To assess the impact of loan repayment period on loans performance of commercial banks in Kenya.

Research Hypothesis

H₀₁: Loan appraisal process has no significant impact on loans performance of commercial banks in Kenya

H₀₂: Cost of loan has no substantial effect on loans performance of commercial banks in Kenya.

H₀₃: Loan disbursement has no significant impact on loans performance of commercial banks in Kenya

H₀₄: The repayment period has no substantial impact on loans performance of commercial banks in Kenya.

Literature Review

Theoretical Review

Technology Acceptance Model

The model was originally put forward by Davis (1986), the “Technology Acceptance Model (TAM)” is rooted in the “Theory of Reasoned Action and the Theory of Planned Behavior.” The model advocates that technology acceptance is determined by two key perceptions: “perceived ease of use and perceived usefulness” (Davis, 1989). Davis argued that to increase technology usage one must start with enhancing user acceptance, which can be measured by gauging one’s purpose to use a particular technology.

In Kenya, digital lending illustrates TAM in action. According to FSD Kenya (2019), 54% of loans in 2018 were obtained through digital platforms, totaling 25 million loans—or an average of eight loans per borrower. These figures indicate that accessibility and convenience were primary motivators. TAM informs this study by helping to explain how streamlining loan processes such as application, appraisal, and disbursement through digital platforms can result in increased access for individuals who may not be creditworthy, thereby potentially contributing to higher NPL levels. Hence, TAM supports the study’s independent variable.

Information Asymmetry Theory

Formulated in the 1970s by Spence, Akerlof, and Stiglitz, “Information Asymmetry Theory” addresses situations where one of the involved participants possesses more or better information than the other. This discrepancy can result in exploitation, “market inefficiencies, and unfair practices.” The theorists highlighted how better-informed financial service providers in developing economies often take advantage of less informed consumers, leading to market imbalances.

Information plays a crucial role during loan appraisals and in helping borrowers choose the most appropriate loan products. This theory guides the current study by examining how gaps in borrower information, especially in digital lending contexts, may result in banks granting loans to high-risk borrowers who eventually default. Additionally, the potential for moral hazard increases when digital borrowers divert loans from business use to personal expenses. Thus, Information Asymmetry Theory underpins the independent variable in this study.

Financial Intermediation Theory

The model was developed by Gurley and Shaw (1960), the “Financial Intermediation Model” is rooted in the asymmetric information model and agency theory. It demonstrates the role of financial intermediaries—both banking and non-banking institutions in addressing issues such as information asymmetries, transaction costs, and asset transformation. According to Gurley and Shaw, intermediaries exist primarily to resolve these market inefficiencies.

Financial intermediaries also help with asset transformation by price discovery, adjusting maturity structures, and liquidity provision. (Gurley & Shaw, 1960) During loan evaluations, financial institutions use appraisal mechanisms to validate borrower information, thereby minimizing the risk of adverse selection. In this context, the Financial Intermediation model underlies the explained variable loan performance as it highlights the critical role of intermediaries in ensuring loan performance.

Empirical Review

Appraisal Process and Loan performance

Credit assessment process is fundamental in determining a borrower’s creditworthiness, with the 5 C’s of credit—capacity, character, contribution, condition, and collateral used as the standard evaluation framework. However, reviews such as Abdulrauf and Hassan (2022), in Nigeria found no strong link between credit assessment and loan repayment in microfinance institutions, suggesting a greater emphasis on credit monitoring. This contrasts with this analysis, which concentrated on Kenyan banks and expanded the scope to include factors such as loan costs and repayment duration. Njenga and Gachanja (2020) focused on government-owned banks and identified external factors like natural calamities as intervening variables affecting NPLs, whereas the review included both public and private institutions. Similarly, Murunga (2018) and Siabei (2019) emphasized the impact of digital loans on the performance of the loans and NPLs in specific regions or institutions. Murunga (2018), explored digital loans appraisal process and its impact on NPLs of commercial banks in Nakuru County. The study showed that loan appraisal process is crucial in minimizing loan defaults, the study also showed that increase in Mobile lending leads to higher NPLs. Siabei (2019), analyzed the influence of digital lending on profitability and

efficiency of MFIs in Nairobi County. The analysis showed that effectiveness of microfinance banks is highly affected by the credit assessment methods.

Cost of Loan and Loan Performance

Regarding loan costs, interest rates have shown varying effects on loan performance. Chege (2013) found a negative interaction between interest rates and NPLs. An increase in interest rates leads to decrease in levels of NPLs. Araka et al. (2021) and Gichuki et al. (2019) noted mixed impacts of “interest rate capping on profitability and loan uptake.” Both studies indicated a decrease in banks’ profitability after interest rates capping. There was a decrease in NPL because of enhanced debt recovery in the bank. The interest rates capping led to more loan uptake by borrowers. (Gichuki et al, 2019). A study by Ngungu and Abdul, (2020) explored the effect of firm’s characteristics on NPL of commercial banks, results showed interest rates did not mediate the relationship. The liquidity had little effect on NPLs, while bank size and capital adequacy significantly affected NPLs. Higher interest rates lead to higher monthly installment for the borrower. This causes financial strain or liquidity problems for the businesses or individuals. This financial burden may lead to default (Warue, 2012; Adhing’a & Gatauwa, 2023). High interest rates lead to adverse selection where only the risky borrowers are willing to borrow at those high rates. To maximize return, financial institutions relax appraisal criteria, hence, high defaults.

Loan Disbursements and Loan Performance

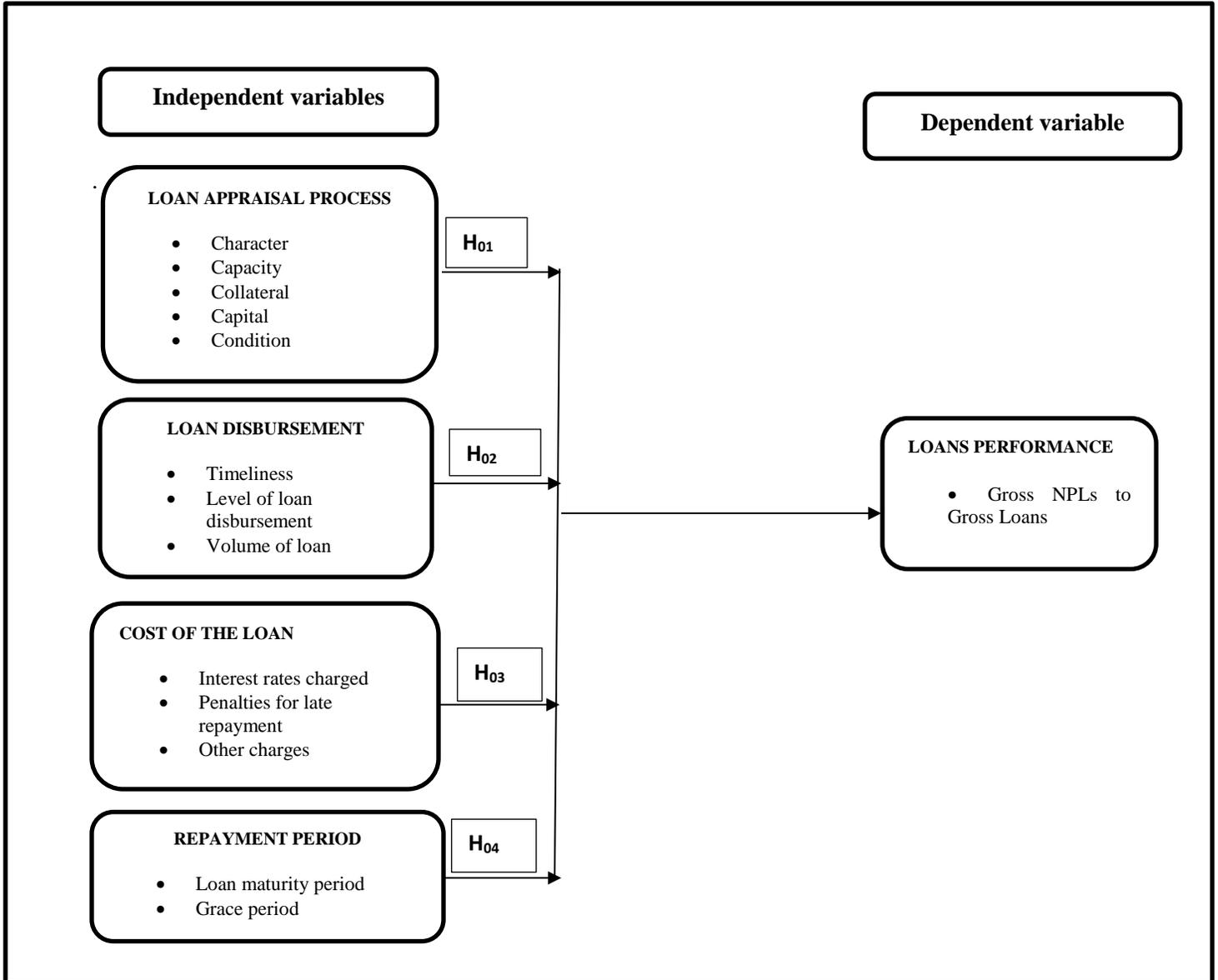
Disbursement is the process of crediting funds to a successful applicant or funding a transaction. On loan disbursement, reviews like Ymenu (2018) and Asfaw et al. (2016) showed a positive link between disbursement and profitability but also took note of risks from aggressive lending. The analysis assessed this further within the Kenyan context using more recent data. Ymenu, (2018) analyzed the impact of loan disbursement on banks profitability in Ethiopia. The study showed that loan disbursements are the main source of income for banks, however excess lending leads to higher NPLs. Asfaw et al., (2016), in their study on factors influencing NPLs in Ethiopian commercial banks, demonstrated that aggressive lending leads to higher NPLs. Magali's, (2013) study on factors influencing default risks for rural SACCOs in Tanzania identified various contributors to loan defaults, including loan size and borrowers' education levels. In the study, increase in loan volumes led to higher levels in default rates. Where banks lack effective control

and monitoring over the actual utilization of the disbursed funds leads to NPLs. If the borrower diverts the funds from the intended productive purpose, the project may fail, leading to non-repayment (Scispace, 2018). Accelerating credit expansion, which includes higher loan disbursement volumes, especially during economic booms, can lead to weak lending standards. When the economy eventually recesses, the newly disbursed, lower-quality loans are the first to turn into NPLs (Louzis et al., 2012).

Loan Repayment Terms and Loan performance

Loan repayment periods have influence on default rates, with shorter durations associated with higher NPLs, as shown by Mensah et al. (2013). Other reviews such as those by Abu et al. (2017); Maigua (2017), revealed that unfavorable repayment terms significantly contributed to loan defaults, though they lacked moderate variables, which this research included. Shorter repayment periods necessitate higher installment or bullet payments (Ademola & Abimbola, 2023; Gakinya & Gatauwa, 2025). This tight schedule leads to greater cash flow burden on the borrower, increasing the risk of default, especially if their income is irregular. On the other hand, longer maturity terms may lead to exposure to economic factors and may lack proper monitoring leading to defaults. Ademola & Abimola, (2023) in their study also found that rigid loan terms lead to higher NPLs since borrowers are not cautioned against emergencies. Lack of forbearance such as Restructure and interest holidays during tough economic times may lead to loan graduating to NPL. (ECB, 2016). A study by Mensah et al, (2013) on loan defaults and repayment schedules of MFIs in Ghana found that loan with shorter repayment term performed poorly compared to those with longer repayment period.

Conceptual Framework



Research Methodology

To demonstrate the understanding of the connection between mobile-based lending and loan performance in Kenyan banks, the research adopted positivist research philosophy (Lewis et al., 2013). Research design refers to the framework a researcher uses to collect, analyze, and interpret data. This analysis aimed to assess the connection between mobile-based lending and loan performance among Kenyan banks. For this goal to be achieved, the research analyzed statistical data to produce both quantitative and qualitative findings. A descriptive research design was employed, using a structured questionnaire for data collection and a purposive sampling technique for participant selection (Blumberg et al, 2012; Kipngetch & Gatauwa, 2024; Gatauwa, Aluoch & Adhing'a, 2024).

Using a multiple regression model, the analysis sought to assess the interaction between mobile-based lending and the loan performance of Kenyan commercial banks. The independent variables included the loan appraisal process, the cost of the loan, loan disbursement, and the repayment period, while loan performance was the dependent variable.

$$Y = \beta_0 + \beta_1 LA + \beta_2 DL + \beta_3 CL + \beta_4 LR + \epsilon_i \dots\dots\dots (1)$$

Where;

Dependent variable -Y- non-performing loans

Independent variables-LA- loan appraisal process, LD- loan disbursements, CL- The cost of the loan, LR- Loan repayment period

Regression parameters- β_0 -Y-intercept, β_1 , β_2 , β_3 and β_4 - are regression coefficients, ϵ_i - error term

Target Population

Mwendwa, Gatauwa and Mungai (2024) explain the study population as the entire set of elements from which research conclusions are drawn. In line with these definitions, this analysis concentrated on all commercial banks operating in Kenya. Specifically, the population consisted of all thirty-nine banks recognized in the 2023 Bank Supervision Report. These institutions were selected because they provide relevant insights into the study's objectives, particularly concerning mobile-based lending and its relationship to non-performing loans within the banking sector. According to the supervisory report, there were 38 commercial banks and 1 mortgage finance company operating in Kenya as of December 2023.

Sampling Design

Sampling refers to the process of selecting a subset of a larger population for research purposes (Ahuja, 2011). In this study, the participants were drawn from the credit departments of various commercial banks. Using purposive sampling, two employees from each of the 38 commercial banks were deliberately chosen based on their relevance to the study topic. This method ensured that the selected individuals had appropriate knowledge and experience, resulting in a total sample size of 76 respondents for data collection and analysis.

Data Collection Procedure

The researcher initiated the process by securing a research approval letter from Kenyatta University, followed by securing a research authorization letter from NACOSTI. To assess the questionnaire's validity, a pilot test involving 20 employees from 3 banks, not part of the main study, was conducted. This test aims to ensure the objectives are achievable. Subsequently, face-to-face administration of questionnaires were conducted among the target population, supplemented by electronic distribution via email to employees working outside Nairobi City County.

Diagnostic Testing

To ensure assumptions underlying the regression model are met, the researcher performed diagnostic tests aimed at ensuring the best linear unbiased estimates. (BLUE) They include normality tests, multicollinearity, linearity, and heteroscedasticity tests were applied.

Multicollinearity Test: Variance Inflation Factor and tolerance value were examined to determine whether independent variables were intercorrelated, this could bias regression estimates (Gakinya & Gatawa, 2025).

Normality Test: Shapiro–Wilk tests were used to determine if the residuals were normally distributed, where the null hypothesis of normality was rejected if $p < 0.05$ (Odhwa & Mutsweje, 2023).

Linearity Test: This is a test aimed at assessing whether the relationship between predictor variables and dependent variables is linear. Linearity is observed when the predicted variable is linear to each independent variable when others are held constant (Krieger, 2018).

Heteroscedasticity Test: it was necessary to determine if the variance of the error terms were constant across observations, in order not to cause inefficiency of the regression estimates (Gakinya & Gatawa, 2025).

Anova Test: test is a statistical tool used to determine if there are any statistically significant differences between the means of three or more independent (unrelated) groups. It essentially allows you to compare multiple groups means simultaneously to see if the observed difference is real or merely due to random chance.

Results and Discussion

Diagnostic Testing

Multicollinearity Test

The review used Variance Inflation Factor, as Besley (1991) suggested, to conduct a multicollinearity test. For an efficient parameter estimate, VIF less than 10 is an indication of weak multicollinearity, while that which is above 10 implies the severity of the collinearity among the explanatory variables.

Table 1: Variance Inflation Factor Test

<i>Variable</i>	<i>VIF</i>	<i>I/VIF</i>
Non-Performing Loans	1.03	0.972751
Loan Appraisal Process	1.12	0.895557
Cost of the Loan	1.02	0.976798
Loans Disbursed	1.10	0.910663
<i>Loan Repayment Period</i>	<i>1.06</i>	<i>0.797557</i>

The Variance Inflation Factor (VIF) values displayed in the table indicate that there is no issue of multicollinearity among the variables in the analysis. All VIF values are below 10, with the highest being 1.12 for the Loan Appraisal Process and the lowest being 1.02 for Cost of the Loan. VIF values greater than 10 suggest significant multicollinearity, the results demonstrate that the explanatory variables (loan performance, Loan Appraisal Process, Cost of the Loan, Loans

Disbursed, and Loan Repayment Period) do not suffer from multicollinearity issues. This exhibits that the variables reveal low intercorrelation, allowing for their inclusion in the regression analysis without the risk of multicollinearity or inflated standard errors.

Normality Test

Data is considered normally distributed when the p-value is greater than 0.05; if $z > 0.05$, this indicates that the residuals are normally distributed; otherwise, they are not. The results of the Shapiro-Wilk test for normality are presented below.

Table 2: Shapiro-Wilk Test

<i>Variable</i>	<i>Obs</i>	<i>W</i>	<i>V</i>	<i>Z</i>	<i>Prob>Z</i>
Non-Performing Loans	72	0.9347	4.112	3.080	0.0001
Loan Appraisal Process	81	0.7232	19.189	6.478	0.000
Cost Of The Loan	72	0.8686	8.270	4.601	0.000
Loans Disbursed	72	0.4851	32.423	7.577	0.000
<i>Loan Repayment Period</i>	<i>91</i>	<i>0.7425</i>	<i>19.654</i>	<i>3.215</i>	<i>0.000</i>

The Shapiro-Wilk test for normality is used to assess whether the variables in the dataset follow a normal distribution. In the provided results, the "Prob > Z" values for all variables are less than 0.05 (ranging from 0.0001 to 0.000), which indicates that the null hypothesis of normality is rejected for all variables. This means that the data for Non-Performing Loans, Loan Appraisal Process, Cost of the Loan, Loans Disbursed and, Loan Repayment Period do not follow a normal distribution. As a result, non-parametric statistical methods may be more appropriate for analyzing these variables in subsequent analyses.

Linearity test

The linearity assumption must be upheld for the linearity test results, which this study conducted. The divergence from the test results must be more than the alpha value of 0.05.

Table 3: Linearity Test

<i>Variable</i>	<i>Deviation from Linearity (Sig.)</i>
Non-Performing Loans	0.329
Loan Appraisal Process	0.213
Cost of the Loan	0.196
Loans Disbursed	0.196
<i>Loan Repayment Period</i>	<i>0.125</i>

The results of the linearity test suggest that the assumption of linearity is upheld for all variables in the study. The significance values (p-values) for each variable are all greater than the alpha value of 0.05, which indicates that there is no significant deviation from linearity. Specifically, the p-values for Non-Performing Loans, Loan Appraisal Process, Cost of the Loan, Loans Disbursed, and Loan Repayment Period are all well above 0.05, confirming that the relationship between these variables and the dependent variable (Loans Performance) can be considered linear. Therefore, the linearity assumption is satisfied, and the variables are appropriate for inclusion in a linear regression model.

Table 4: Breusch-Pagan Test

Breusch-Pagan Test for Heteroscedasticity		
Chi-Square	df	Sig.
3.310	1	.069
a. Dependent variable: NON-PERFORMING_LOANS		
b. Tests the null hypothesis that the variance of the errors does not depend on the values of the independent variables.		

The critical value for chi square at 0.05 level of significance is 3.81 which is greater than calculated chi square (3.31) we fail to reject the null hypothesis that the variance of error does not depend on the values of the independent variable. This means that homoscedasticity exists.

Table 5: Analysis of Variance

Anova ^a					
Model	Sum Of Squares	Df	Mean Square	F	Sig.
1 Regression	40.441	4	10.110	37.306	.000 ^b
Residual	18.970	70	.271		
Total	59.411	74			
A. Variable Dependent: Non-Performing Loans					
B. Predictors: (Constant), Repayment Period, Cost of The Loan, Loan Appraisal Process, Loan Disbursement					

The ANOVA table assesses the overall adequacy of the regression model by determining whether the set of independent variables—namely, loan appraisal process, loan cost, disbursed loans, and repayment period—jointly account for a significant proportion of the variance in loan performance. This model yields an F-statistic of 37.306, which evaluates whether at least one of the predictors significantly explains the variability in the dependent variable, loan performance (NPLs). A high F-value, such as the one observed, implies that the explanatory variables have a considerable portion of the variance in NPLs when compared to the unexplained (residual) variation.

Moreover, the associated p-value of 0.000 is well below the conventional significance threshold of 0.05, revealing that overall, the regression model is statistically significant. This highlights that the independent variables—loan appraisal process, cost of the loan, amount disbursed, and repayment period—exert a significant combined effect on loan performance, thereby confirming that the model is an appropriate fit for the dataset under analysis.

Table 6: Model Summary

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	Df1	Df2	Sig. Change
1	.825 ^a	.681	.662	.520582	.681	37.306	4	70	.000
A. Predictors: (Constant), Repayment Period, Cost of The Loan, Loan Appraisal Process, Loan Disbursement.									
B. Dependent Variable: Loan Performance									

The model summary indicates that the linear regression model is statistically significant and explains a substantial portion of the variance in loan performance. The correlation coefficient (R) is 0.825, suggesting a strong positive relationship between the predicted and actual values of loan

performance. The R Square value of 0.681 means that approximately 68.1% of the variability in loan performance can be explained by the combined effect of the four independent variables: repayment period, cost of the loan, loan appraisal process, and loan disbursement.

Table 7: Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Constant	3.210	1.592		2.016	.048
loan appraisal process	-0.943	.322	-1.040	-2.927	.005
cost of the loan	0.404	.227	0.560	1.768	.000
loans disbursed	0.437	0.274	0.532	1.596	.000
loan repayment period	0.157	.042	0.255	3.970	.003

a. Dependent Variable: NPLs of commercial banks in Kenya.

The regression coefficients table reveals the individual impact of each predictor on loan performance. The constant value (3.210) is statistically significant, indicating the expected baseline level of NPLs when all predictors are zero. Among the predictors, the loan appraisal process has a significant negative effect ($B = -0.943$, $p = .005$), suggesting that a more thorough appraisal process reduces non-performing loans. Conversely, cost of the loan ($B = 0.404$, $p = .000$), loan disbursement ($B = 0.437$, $p = .000$), and repayment period ($B = 0.157$, $p = .003$) all show positive and significant effects, indicating that increases in these factors are associated with higher non-performing loans. Overall, the model shows that both financial and procedural factors significantly affect Loan performance.

Conclusions and Recommendations

Conclusion

The study investigated the key determinants of poor loan performance in Kenyan commercial banks, focusing on five main factors: the credit assessment process, loan cost, loan disbursement, and repayment period. Regression analysis revealed that each of these variables significantly affects the level of NPLs, resulting to the rejection of all five null hypotheses. The findings indicate

that a more vigorous credit assessment process can help reduce default rates. Rising loan costs, including interest and fees, were associated to higher default risks, emphasizing the need for affordable rates. In addition, a larger volume of disbursed loans correlated positively with NPLs, underscoring the significance of monitoring disbursement practices. Longer repayment periods were also associated with increased defaults, suggesting banks should assess repayment terms carefully. Overall, the review highlights the important role these elements play in reducing loan defaults.

Recommendations

There is need for Kenyan banks to do a thorough assessment on the borrower to ascertain their ability. This can be possible through sharing credit information and use of credit scores from credit reference bureaus. This will result to better lending practice through digital channels and hence minimize losses because of provisions for bad debts. Banks need to offer loan products at affordable rates and offer flexible repayment terms to the borrowers. This will encourage borrowers to honor their obligations, hence, reduce default rates. The banks need to monitor loan disbursements to ensure customers are not overfunded or under-funded. There is also need for post disbursement monitoring to avoid diversion of funds.

References

- Abdulrauf, L. A., & Hassan, A. O. (2022). Credit appraisal, collection policy and loan performance of Microfinance banks in Kwara State, Nigeria. *Journal of Accounting and Finance*, 3(1), 21-21.
- Ademola, A. O., & Abimbola, O. A. (2023). Effects of loan terms and borrowers' behavior on non-performing loans in Nigeria's microfinance banks. *International Journal of Business and Economics*, 8(1), 1008–1024.
- Abimbola, O. A. (2021). Understanding the Factors Influencing Loan Repayment Performance of Nigerian Microfinance Banks. *Journal of Management Sciences*, Vol. 4(3).
- Abu, B. M., Domanban, P. B., & Issahaku, H. (2017). Microcredit loan repayment default among small scale enterprises: A double hurdle approach. *Ghana Journal of Development Studies*, 14(1), 146-165.

- Adhing'a, D. C., & Gatauwa, J. M. (2023). Fintech banking and access to financial services among commercial banks in Kenya. *International Academic Journal of Economics and Finance*, 3(9), 463-484.
- Ahuja, R. (2011). *Research Methods*. Rawat Publications.
- Akerlof, G., A. (1970). The market for "lemons": Quality uncertainty and the market mechanism. *The Quarterly Journal of Economics*, 84(3), 488-500.
- Araka, H., Otieno, S., & Mogwambo, V. (2021). Effect of Interest Rate Regulation on the Relationship Between Loan Lending Policies and Financial Performance of Commercial Banks in Kenya. *Research Journal of Finance and Accounting*, 12(4), 60-75.
- Asfaw, A. S., Bogale, H. N., & Teame, T. T. (2016). Factors affecting non-performing loans: case study on development bank of Ethiopia central region. *International Journal of Scientific and Research Publications*, 6(5), 656-670
- Blumberg, B., Cooper, D., & Schindler, P. (2014): *Business Research Methods*. McGraw Hill.
- Central Bank of Kenya (2021). *Bank Supervision Annual Report 2021*. Nairobi: CBK
- Chege, M. (2014). Effect of interest rates on non-performing loans in Commercial Banks in Kenya. Unpublished Masters project, University of Nairobi
- Davis, F. D. (1986). A technology acceptance model for empirically testing new end-user information systems: Theory and results (Doctoral dissertation, Massachusetts Institute of Technology). MIT Sloan School of Management.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340.
- Esponda, I. (2008). Behavioral equilibrium in economies with adverse selection. *American Economic Review*, 98(4), 1269-1291.
- European Central Bank (ECB). (2016). Guidance to banks on non-performing loans.
- Eyraud, L., Bunda, I., Jack, J., Jardak, T., Ouedraogo, R., Wang, Z., & Wezel, T. (2021). Resolving Nonperforming Loans in Sub-Saharan Africa in the Aftermath of the COVID-19 Crisis. DP/2021/014. [https://doi.org/International Monetary Fund, Publication Services](https://doi.org/International%20Monetary%20Fund,%20Publication%20Services)
- Gakinya, C. N. & Gatauwa, J. (2025). Sustainability investments and financial performance of commercial banks in Kenya. *International Academic Journal of Economics and Finance*, 5(1), 311-335.

- Gatauwa, J. M., Aluoch, M. O., & Adhing'a, D. C. (2024). Fintech services and corporate sustainability in commercial banks in Kenya. In *The Adoption of Fintech* (pp. 114-126). Productivity Press.
- Gichuki, E. M., Mwaniki, G., & Ogolla, D. (2019). Interest rate capping by the Central Bank of Kenya on loan uptake. *International Academic Journal of Economics and Finance*, 3(5), 33-44.
- Githama, J., & Gachanja, P., (2020). Effects of credit appraisal methods on non-performing loans in government owned financial institutions: A case of Kenya Commercial Bank Limited. *International Journal of Current Aspects*, 4, (2), 1-12.
- KBA., (2022). Banking Industry Consumer Satisfaction Survey. KBA
- Kipngetch, G. C., & Gatauwa, J. (2024). Environmental sustainability reporting and financial performance of firms listed at the Nairobi Securities Exchange, Kenya. *IOSR Journal of Economics and Finance*, 15(2), 54–68.
- Krieger, R. (2018). The importance of assumptions in multiple regression and how to test them. *Research Journal of Finance and Accounting*, 12(4), 1-10.
- Lewis, C., Fretwell, C., Ryan, J., & Parham, J. (2013). Faculty use of established and emerging technologies in higher education: A Unified Theory of Acceptance and Use of Technology perspective. *International Journal of Higher Education*, 2(2), 22–34.
- Louzis, D. P., Vouldis, A. T., & Metaxas, V. L. (2012). Macroeconomic and bank-specific determinants of non-performing loans in Greece: A comparative study of mortgage, business and consumer loan portfolios. *Journal of Banking & Finance*, 36(4), 1012–1027.
- Maigua, T. W. (2017). Determinants of loan repayment default in Micro-Finance Institutions in Kenya (Masters Project, University of Nairobi).
- Mensah, C., Raphael, G., Dorcas, O., & Kwadwo, B. Y. (2013). The relationship between loan default and repayment schedule in microfinance institutions in Ghana: A case study of Sinapi Aba Trust. *Research Journal of Finance and Accounting*, 4(19), 165-175.
- Murunga, D. (2018). Effect of mobile-based lending platform on non-performing loans in commercial banks in Nakuru Town, Kenya (Masters Project, JKUAT).
- Mwendwa, M., Gatauwa, J., & Mungai, J. (2024). Venture Capital and Financial Performance of E-Commerce Driven Firms in Kenya. *International Journal of Finance and Accounting*, 9(2), 42–61.

- Odhowa, F. M., Mutswenje, V. S. (2022). Cashflow management activities and financial performance of manufacturing firms listed at Nairobi Securities Exchange, Kenya. *International Academic Journal of Economics and Finance*, 3(8), 167-185.
- SciSpace. (2018). Analysis of Post Loan Disbursement Allocation and Performance of Non-Prime Household Loan in Microfinance Banks in Kenya.
- Siabei., R. (2019). Influence of mobile-based lending on the financial performance of Microfinance banks in Nairobi County, Kenya. Kabarak University Repository
- Sinkey, J. F. & Mary B. G. (1991). Loan-Loss experience and risk-taking behavior at Large Commercial Banks. *Journal of Financial Services Research*, 5, 43-59.
- Warue, B. (2012). Causes and control of loan default/delinquency in microfinance institutions in Ghana. *American International Journal of Contemporary Research*, 4(12), 17–28.
- Ymenu, S. (2018). The Impact of Deposit Mobilization and Loan Disbursement on Financial Performance of Commercial Banks in Case of Ethiopia. Unpublished master's in business administration Thesis: Addis Ababa University.