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CREDIT ASSESSMENT CRITERIA AND LOAN PERFORMANCE IN COMMERCIAL BANKS IN KENYA

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ABSTRACT

Credit assessment remains a critical function in commercial banking because of its influence on loan performance and overall financial stability. This study examined the effect of selected credit assessment criteria on loan performance in Kenyan commercial banks, with particular focus on borrower character and collateral requirements. Despite the growing importance of effective credit appraisal, empirical evidence on the relative contribution of these factors to loan performance in Kenya remains limited. The study was anchored on the Credit Rationing Theory and the Credit Hazard Model. A descriptive and correlational research design was adopted to examine trends and relationships between credit assessment practices and loan performance from 2015 to 2024. A census of all 38 commercial banks licensed by the Central Bank of Kenya as at December 2024 was conducted. Secondary data were collected from Central Bank of Kenya reports, audited financial statements, and other published banking records. Data were analyzed using SPSS version 27 through descriptive statistics and panel regression analysis. The findings revealed that borrower character and collateral requirements had a positive and statistically significant influence on loan performance. Borrower character emerged as the most influential predictor, explaining 84% of the variation in loan performance, while collateral requirements explained 82% of the variation. The results indicate that borrowers with strong repayment histories and low default records are more likely to maintain satisfactory loan performance. Similarly, adequate collateral coverage enhances loan recovery and reduces credit risk exposure. The study concludes that borrower character and collateral requirements are critical determinants of loan performance in Kenyan commercial banks. The study recommends that commercial banks strengthen credit appraisal systems by placing greater emphasis on borrowers' repayment history, creditworthiness, and collateral adequacy during loan evaluation and monitoring processes. These measures are likely to improve loan quality, reduce default rates, and enhance the stability of the banking sector in Kenya.

Keywords: Borrower Character, Collateral Requirements, Credit Assessment, Loan Performance, Commercial Banks, Kenya.

Background of the Study

Credit assessment is an important exercise in the commercial banking industry, and it lays the foundation of the stability of lending practices and the financial system. It is a systematic evaluation of the capacity and willingness of a borrower to repay the loan within the income flows, credit among other reports, collateral and the economic environment (Njeri and Waweru, 2023). Since the significant contributor to the banking revenue is prudent lending, proper credit assessment should be upheld in a way that only loans are made in a way that is fiscally viable, and thus, profitable (Mwangi, 2024). Healthy credit screening also assists the banks in making informed lending decisions, promotes a healthy borrowing and enhances overall economic growth. The world banking is under constant stress between loan giving and good banking. Khan and Qureshi (2022) discuss how all financial institutions globally are interested in streamlining their loan portfolios by setting goals of growth and serious screening of borrowers, yet market forces, consumer behaviour, and policy alterations tend to interfere with this balance. The problems are greater in the emerging economies, including Kenya, because of the rapidly evolving financial regimes and ongoing attempts to promote financial inclusion (Ouma & Ndegwa, 2023).

The Kenyan banking sector has experienced massive credit growth in the past decade, which is driven by increased credit demands by the individuals, small and medium-sized enterprises (SMEs), and large corporations. Despite the fact that this growth contributes to the economic modernization, it also reflects the importance of high-quality and up-to-date credit appraisal to ensure the quality of loan performance. The commercial banks in Kenya are significant to the economic growth of the nation that avails credit to businesses so that they can invest in the country and develop it, and create employment opportunities. The SMEs, which constitute the main part of the Kenyan economy, depend on bank loans to finance operations and innovation (Chege & Kamau, 2024). Similarly, commercial credit is relied on by people who desire to get a home, an education, and a means of improving themselves. Loan performance is many and is normally measured by repayment, with many factors being interrelated. Collateral may be considered as well in the assessment of the loan, especially when it comes to real estate, equipment, and vehicles as it gives the loan security and gives it an opportunity of being recovered in case of default in repayment (Muthoni, 2023).

Irrespective of the control mechanisms, such as the Prudential Guidelines and the Credit Reference Bureau (CRB) system, Kenyan commercial banks could not make sure that loans were performing well (Muthoni, 2023). There are unaddressed loopholes (e.g. over-reliance on subjective judgment, high percentage of the economy in the informal sector among borrowers, etc.) still being used as credit assessment criteria (Njeri & Waweru, 2023; Ouma and Ndegwa, 2023). With these complexities, credit evaluation requirements are crucial in enhancing loan performance. Improved assessment schemes would allow banks to make improved lending decisions, have a stricter management style and have more financial capacity. The paper shall therefore critically examine how the credit evaluation process affects performance of the loan in Kenyan commercial banks with a view of uncovering revelations that shall inform banking practice and policy making. Examination of credit has played an important role in the success of banks and economy. The systematic evaluation of the capacity and intention of borrowers to repay loans can help banks to improve performance and financial stability of loans. The constant changes in credit assessment techniques to enable sustainable lending and economic growth are done against a backdrop of incessant problems in loan repayment, which are instigated by both borrower specific and macroeconomic environment.

Objectives of the Study

The main objective of the study was to establish the impact of credit assessment criteria on loan performance in commercial banks in Kenya.

Specific Objectives

i. To establish the impact of borrower character on loan performance in commercial banks in Kenya.
ii. To determine the effects of collateral requirements on the performance of loans in Kenyan commercial banks.

LITERATURE REVIEW

Theoretical Review

Credit Rationing Theory

According to Stiglitz and Weiss (1981), credit rationing theory explains how commercial banks restrict lending to borrowers willing to accept high rates because of their information asymmetry with respect to commercial banks. For example, banks are concerned about how borrowers could be high-risk, and borrowers know more about their projects, how they will use the funds, the risk class they fall under, and the overall quality of the project. For banks, the uncertainty of the behavior (risky versus conservative) of the borrower both before (ex-ante) and after (ex post) the loan is given creates the potential for adverse selection and moral hazard. From the perspective of the lender, adverse selection occurs when high-interest rate loans attract borrowers with a higher likelihood of defaulting on the loan. Moreover, moral hazard is a situation in which a borrower could undertake a riskier course of action after receiving the loan than the lender had contemplated because the lender bears a portion of the financial loss. Stiglitiz and Weiss (1981) showed that once the risk, in terms of quality, of potential borrowers increases, and the likelihood of the borrower defaulting on the loan increases, the return on lending to the borrower does not become higher because, with an increase in the interest rate, the return on the loan becomes lower. This is what Stiglitiz and Weiss (1981) refer to as the paradox of interest rates.

The contradiction of this situation leads to banks choosing credit rationing over price-oriented market disregard. This means that in situations of high demand for credit, banks still choose to decrease the number of loans offered, as the banks cannot lose money to high-risk borrowers, and to decrease expected losses. Credit rationing is not designed to be arbitrary, and as such, is intended to deal with the information asymmetry posed by potential high-risk borrowers, while still attempting to maintain the quality of their loan portfolios and the stability of their finances. More credit rationing means the banks are more concerned with maintaining the stability of their finances. By this definition, the process of credit assessment is the means by which banks deal with information asymmetry. More credit assessment means that banks deal with more information asymmetry. Credit history, cash flow, and collateral are the key elements that support banks, and the more of these elements that a bank has, the greater the capacity of a bank to deal with the risk of borrowers. Good past credit history means low risk, and in that case, banks deal with minimal credit risk. This process allows banks to also deal with the moral hazard associated with the situation by monitoring the situation and having the right covenants in place (Maiti et al., 2020; Kil et al., 2021).

Credit Rationing Theory illustrates the impact of credit assessment practices on the financial performance of commercial banks. When banks implement strong credit assessment procedures, they are able to manage their financial exposure to risk clients, and lose greater amounts of potentially profitable loans. In their studies, Jin and Zhang (2019) and Thakor (2020) provide empirical evidence to show how banks experiencing strong credit assessments also experience lower loan defaults, fewer non-performing loans, and concomitantly improved profits. Inconsistent or weak credit assessment practices reduce the credit assessment (Stiglitz and Weiss, 1981) and leads to greater risks related to the adverse selection and moral hazard. In the end, credit assessment practices are important to the financial performance of

commercial banks given the credit assessment practices and their role in addressing information asymmetry, and deteriorating credit market portfolio risks.

Credit Hazard Model

The Credit Hazard Model by Cantor and Frank (1996) forms the basis for one specific way of looking at credit risk for portfolios, and, as such, is the foundation for the CreditMetrics approach. This model differs from others in that others models only focus on the loan default and no other exogenous events (i.e. loss given default, credit rating change). This feature enables banks and credit institutions to analyze the impact of credit rating losses on the value and risk of the credit portfolio measured through the degree of change of the borrower in one or a given period. This approach enables CreditMetrics to capture and analyze borrower exposure, and default/counterparty risk and other risk types (via statistical models such as value at risk or VAR) to evaluate the risk of credit portfolios such as expected loss, risk, and concentration risk (Rauf et al, 2018). This model has also been used to credit risk in trade credit, letters of credit, and credit derivatives as well as traditional loans.

The Credit Hazard Model is most significant to the field because of the emphasis placed upon the interconnectedness of risk. The model enables lending institutions to detect credit risk concentrations through the appraisal of risk correlations among borrowers rather than in the absence of risk correlation, treating each loan as an isolated risk. This portfolio-level outlook aids in the optimization of the allocation of financial resources, the establishment of lending caps, and the allocation of monitoring resources to inequitable exposures that dominate the risk-return trade-off of the portfolio (Siddique et al., 2022). In this regard, the model adds to previous theories that center on risk at the individual borrower level, showing how aggregated credit choices influence the overall economic outcome. Credit Hazard Model is primarily quantitative, which leads to an overreliance of the model on the risk elements of the borrowers as being of sufficient adequacy in the form of observable credit quality metrics and historical transition matrices. The literature notes that the model fails to consider the qualitative aspects of lending, as it concerns managerial discretion, borrower personality, quality of the project assessment, and adequacy of the post-disbursement monitoring, collecting, and recovering systems (Twinomugisha, 2020). Many qualitative aspects that are critical in assessing default behavior exist outside of the framework of CreditMetrics.

The present study is impacted by this limitation. The Credit Hazard Model demonstrates the impact of shifts in the credit quality of borrowers on the outcome of the portfolios. However, it is almost completely absent on how the banks capture the borrower data that inform the models. The study attempts to address this by considering credit assessment methodologies as the upstream processes where banks assess borrower risk, integrate quantitative data with qualitative data, and affect the quality of the loan portfolios that are measured in the aggregate. This allows the study to expand the Credit Hazard Model by contextualizing the institutional credit assessment methodologies with the portfolio risk and economic performance metrics that the model intends to evaluate.

Conceptual Frame work

The conceptual framework illustrates the relationship between credit assessment criteria and loan performance in commercial banks in Kenya. The independent variables are borrower character and collateral requirements, while loan performance is the dependent variable. Borrower character is assessed through repayment history and previous default records, whereas collateral requirements are assessed through collateral adequacy and value pledged. The framework assumes that effective assessment of borrower character and adequate collateral requirements positively influence loan performance by reducing default risk and enhancing loan recovery.

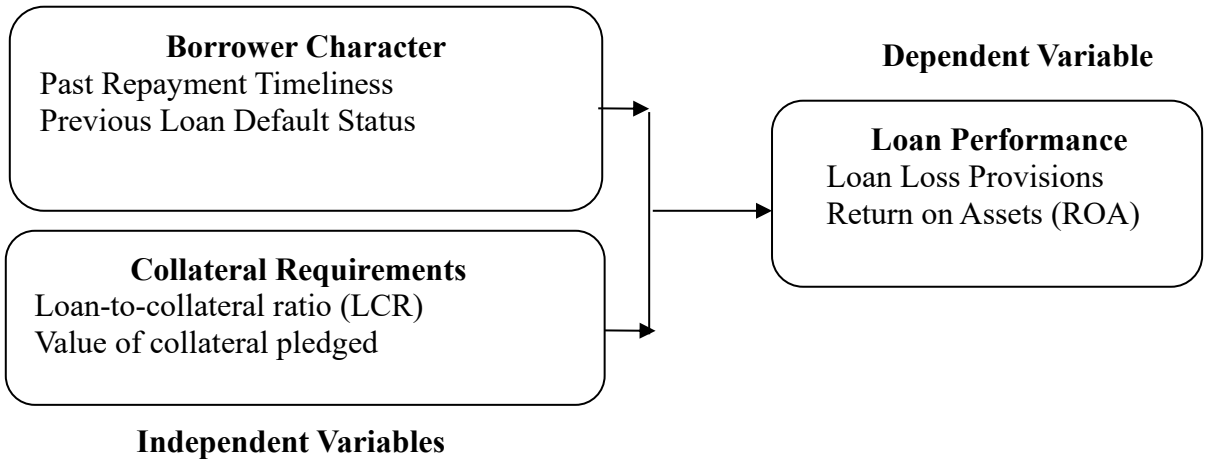

Figure 2.1: Conceptual Framework

Borrower Character

Borrower character indicates an evaluates level of self-discipline and dependability in financial matters and is exemplified in the borrower's credit history. This study assessed borrower character through credit reports obtained from the Central Bank of Kenya (CRB Africa) and TransUnion Kenya. The results showed that borrowers with positive credit history records were more likely to comply with repayment and, therefore, were less likely to be non-performing loans (NPLs). The incorporation of credit bureau reports in the lending process was a game-changer to commercial banks, enabling them to weed out high-risk borrowers, thereby enhancing loan quality (Wanjiku & Ochieng, 2023; Kamau, 2024).

Collateral Requirements

Collateral offers the bank protection in the event of a borrower defaulting on a loan, and as such, the bank will use a borrower's collateral to help the bank mitigate the risk associated with loaning the borrower money. In this research, the focus of the study with regards to collateral, was the value and liquidity of the tangible collateral, such as the pledged property, vehicles, and equipment. The results proved that in regard to bank loans, having collateral will reduce the risk of loan default, since loans that have collateral and are in the form of high-quality assets will, in general, have a lower number of loans that are going to default. On the other hand, the study revealed that a lack of assets that are deemed collateral put a significant amount of restriction on SMEs and Individual's access to credit. This restriction ultimately limits entrepreneurial potential and is detrimental for the long-term range of diversification in the portfolio. (Omondi & Nyaga, 2023, Karanja, 2024).

Loan Performance

Loan performance was positively influenced by strong borrower character and adequate collateral requirements. Borrowers with favorable repayment histories and low default records were associated with improved loan performance, while adequate collateral reduced credit risk and enhanced recovery prospects. Consequently, commercial banks can improve the quality of their loan portfolios by strengthening borrower character assessment and maintaining prudent collateral requirements.

Empirical Review

Borrower Character and Loan Performance

Álvarez-Botas et al. (2024) studied the effects of sharing credit information among financial institutions on how accurate assessments of borrowers are. The authors used a mixed-method approach, applying a combination of quantitative regression analysis of credit bureau data and

qualitative analysis from interviews with credit officers from various countries with emerging credit markets. Their results showed that lenders, from credit reports that are detailed, can evaluate borrowers with credit risk more precisely as to who will default and who will pay back loans, thereby improving repayment rates and default rates. The authors acknowledged a limitation, however, that credit reports do not contain informal financial habits (or informal financial systems) that would lead to borrowers not being eligible for credit evaluations. Our research on Kenyan commercial banks corroborated the findings of the authors revealing that the borrowers with complete documentation from the CRB and verified financial statements had low Non-Performing Loans (NPLs) ratios. Our research improved the predictive power of credit assessments by using alternative data, i.e. salary slips, business records, self-reported financial statements, to address informal financial activities which are predominant within a singular financial system.

Flagg and Hannon (2024) examined small-dollar loans in the U.S. and studied the relationship between credit scores and default rates. They collected data from several lending companies on large-scale loan performance and segmented borrowers by credit score ranges, with an emphasis on comparisons between prime and subprime borrowers. Using logistic regression, they focused on the borrowers in the lower credit score ranges and established that the probability of default was much higher in these groups, thus establishing that credit scores are useful in assessing risk. However, they also identified a unique situation with credit invisible borrowers. These are people who have not established a credit score and have typically been overlooked by conventional credit scoring systems and as a result, they faced the adverse side of the credit gap where they are deprived of affordable credit. Similar to this in our study of Kenya, borrowers who had a limited history of formal credit records had high ratios of NPL, supporting the notion that a good credit assessment will predict payment performance. The inclusion of collateral requirements alongside borrower character provides a broader assessment of borrower risk while maintaining prudent lending decisions and reducing the likelihood of default.

Collateral Requirements and Loan Performance

Geng (2025) examined the role of credit claims acceptance as a form of collateral on liquidity of banks using a multi-year quantitative time series analysis of several banking institutions. The author concluded that increased centrality of the acceptance of credit claims as a form of collateral improves liquidity of banks, thereby improving the capacity of banks to maintain sustainable lending and extend credit with better risk management. However, older fashioned collateral methods tended to fail to resolve the financing problems of smaller and informal sector businesses. In other words, while the acceptance of collateral on bank loans increases the liquidity of the institutions and the lending capacity, banks' overreliance on collateral to manage risk tends to reduce the available credit to smaller businesses. In this regard and similar to Geng, the positive correlation between collateral and lending capacity was evident in the case of small borrowers, leading to the unequal distribution of credit, thereby calling for better oriented collateral mechanisms.

Cole (2023) in his review of the impact of restrictive collateral requirements on small-firm credit accessibility, used a mixed-method approach that captures both the econometric and the qualitative (business owner interviews) dimensions of the problem investigated. From Cole's study, it emerged that businesses that do not have physical assets are penalized by strict collateral requirements, and may suffer from credit rationing, even if they are credit worthy. Cole focused on the trade-off that exists between the management of risk and the provision of finance, arguing that it is bad practice to rely on collateral. The findings from Cole's study resonate with the findings from the current study, which show that small businesses capable of generating a positive cash flow, are often unable to access formal credit. Consistent with Cole's

findings, the evidence confirms that excessive reliance on collateral is detrimental to the growth of the economy, and advocates for a risk balanced approach to lending.

Walubuka et al. (2023) carried out cross-sectional analysis in Meru County, Kenya to understand how collateral requirements affect SMEs ability to obtain credit. The use of collateral in terms of requirements is found in many cases, as the use of collateral will typically be most beneficial to the lender. However, collateral requirements of credit may be so excessive that potential SMEs that are able to repay the loan may be excluded. The study also analyzed the risk and financial inclusion of the financial institutions. The study also analyzed the risk and financial inclusion balance of financial institutions. The study also analyzed the risk and financial inclusion balance of financial institutions. Most of the SMEs [Small and Medium Enterprises] in microfinance lose their Collateral requirements deter SMEs from obtaining credit, and in doing so, financial institutions also risk losing potentially viable SMEs. The findings also demonstrate the focus and balance that must be included in a credit policy.

RESEARCH METHODOLOGY

The study adopted a descriptive and correlational research design to examine the effect of borrower character and collateral requirements on loan performance in Kenyan commercial banks. The target population comprised all 38 commercial banks licensed and regulated by the Central Bank of Kenya (CBK) as at December 2024. A census approach was employed, whereby all licensed commercial banks were included in the study to enhance representativeness and eliminate sampling bias. Secondary data covering the period 2015–2024 were obtained from CBK reports, audited financial statements of commercial banks, annual reports, and Credit Reference Bureau (CRB) reports. A structured data extraction template was used to collect information on borrower character, collateral requirements, and loan performance. The collected data were cleaned, coded, and analyzed using SPSS version 27. Descriptive statistics were used to summarize trends, while panel regression analysis was employed to determine the effect of borrower character and collateral requirements on loan performance. Diagnostic tests, including normality, homoscedasticity, multicollinearity, and the Hausman test, were conducted to ensure the suitability and robustness of the panel regression model.

FINDINGS AND DISCUSSIONS

Descriptive Statistics

This section presents descriptive statistics for the study variables, namely borrower character, collateral requirements, and loan performance. The statistics include the minimum, maximum, mean, standard deviation, skewness, and kurtosis values. These measures provide an overview of the distribution, central tendency, and variability of the study variables across the 380 observations.

Table 1: Descriptive Statistics

Variable	N	Min	Max	Mean	Std. Dev	Skewness	Kurtosis
Past Repayment Timeliness	380	0.60	1.00	0.842	0.102	-0.210	0.456
Previous Loan Default Status	380	0.00	1.00	0.132	0.338	2.120	4.500
Loan-to-Collateral Ratio (LCR)	380	0.30	1.20	0.785	0.180	0.410	-0.120
Value of Collateral Pledged (Million KES)	380	0.50	5.80	2.740	1.120	0.315	-0.230
Return on Assets (ROA)	380	2.00	3.20	2.587	0.309	0.089	-0.780
Loan Loss Provisions	380	69.80	451.40	233.563	76.519	0.495	0.597

The findings indicate that borrower character was generally strong among the sampled banks. Past repayment timeliness recorded a mean score of 0.842 with a relatively low standard deviation of 0.102, suggesting that most borrowers maintained consistent repayment behavior. The distribution was approximately normal, as indicated by the low skewness and kurtosis values. Previous loan default status recorded a mean of 0.132, implying that only a small proportion of borrowers had a history of loan default. The high positive skewness and kurtosis values indicate that most observations were concentrated among borrowers with no prior default history.

Regarding collateral requirements, the loan-to-collateral ratio recorded a mean of 0.785 and a standard deviation of 0.180, suggesting moderate variation in the extent to which loans were secured by collateral. The value of collateral pledged averaged KES 2.74 million, indicating substantial collateral support for loans across the sampled banks. Both collateral indicators exhibited relatively low skewness and kurtosis values, suggesting stable distributions with limited extreme observations.

Loan performance was assessed using Return on Assets (ROA) and Loan Loss Provisions. The mean ROA was 2.587 with a standard deviation of 0.309, indicating relatively stable profitability levels among commercial banks. Loan Loss Provisions recorded a mean of 233.563 and a standard deviation of 76.519, suggesting notable variation in provisions set aside to cover potential loan losses. The positive skewness observed for Loan Loss Provisions indicates that some banks recorded comparatively higher provisions than others.

Overall, the descriptive statistics suggest that borrower character and collateral requirements were relatively stable across the study period, while loan performance indicators exhibited moderate variation among commercial banks. These findings provide a basis for the subsequent diagnostic tests and panel regression analysis aimed at establishing the influence of borrower character and collateral requirements on loan performance.

Diagnostic Tests

Before conducting the panel regression analysis, diagnostic tests were performed to ascertain whether the dataset satisfied the assumptions underlying regression analysis. The tests examined normality, autocorrelation, homoscedasticity, multicollinearity, and model specification. The results provided evidence on the suitability of the data for panel regression analysis.

Test of Normality

Normality was assessed using skewness, kurtosis, and the Shapiro-Wilk test. A variable was considered normally distributed if the skewness and kurtosis values were within acceptable limits and the Shapiro-Wilk significance value exceeded 0.05.

Table 2: Test of Normality

Variable	Skewness	Kurtosis	Shapiro-Wilk Statistic	df	Sig.
Borrower Character	0.097	2.881	0.981	390	0.317
Collateral Requirements	-0.145	3.042	0.986	390	0.298

Author (2026)

The findings indicate that borrower character and collateral requirements exhibited approximately normal distributions. The skewness values were close to zero, indicating minimal departure from symmetry, while the Shapiro-Wilk significance values exceeded 0.05. Consequently, the normality assumption was satisfied and the variables were considered suitable for regression analysis.

Test of Autocorrelation

Autocorrelation was assessed using the Durbin-Watson statistic. Values between 1.5 and 2.5 indicate the absence of significant autocorrelation among residuals.

Table 3: Durbin-Watson Test of Autocorrelation

Model	Durbin-Watson Statistic
Loan Performance versus Borrower Character and Collateral Requirements	1.94

Author (2026)

The Durbin-Watson statistic of 1.94 falls within the recommended range of 1.5 to 2.5, indicating that the residuals were independent and that autocorrelation was not a concern in the regression model.

Test of Homoscedasticity

The Breusch-Pagan test was used to determine whether the residuals exhibited constant variance.

Table 4: Breusch-Pagan Test for Homoscedasticity

Test	χ^2	Sig.
Breusch-Pagan	7.56	0.182

Author (2026)

The Breusch-Pagan significance value of 0.182 exceeded the 0.05 threshold, indicating that the residuals exhibited constant variance. Therefore, the homoscedasticity assumption was met.

Test of Multicollinearity

Multicollinearity was examined using Variance Inflation Factor (VIF) and tolerance values. VIF values below 10 and tolerance values above 0.10 indicate the absence of multicollinearity.

Table 5: Multicollinearity Test Results

Variable	VIF	Tolerance
Borrower Character	2.14	0.467
Collateral Requirements	1.65	0.606

Author (2026)

The results show that both variables recorded VIF values substantially below 10 and tolerance values above 0.10. This confirms that multicollinearity was not present and that the variables could be included simultaneously in the regression model without affecting the reliability of coefficient estimates.

Hausman Test for Model Selection

The Hausman specification test was conducted to determine whether the Fixed Effects (FE) or Random Effects (RE) model was more appropriate for the panel data analysis.

Table 6: Hausman Test Results

Test Statistic	df	Prob > χ^2
52.87	2	0.000

Author (2026)

The Hausman test produced a chi-square statistic of 52.87 with a probability value of 0.000, which is below the 0.05 significance level. The null hypothesis was therefore rejected,

indicating that the unobserved bank-specific effects were correlated with the explanatory variables. Consequently, the Fixed Effects model was selected for the regression analysis because it provides consistent and reliable estimates of the influence of borrower character and collateral requirements on loan performance.

Panel Data Regression Analysis for Borrower Character on Loan Performance

An analysis of the impact of borrower character on the performance of loans in commercial banks in Kenya was done by conducting a panel data regression analysis. The panel design was suitable as it is able to capture the cross-section-differences between the banks and as well as time varying differences besides holding constant those bank-specific factors that could affect the loan performance.

The character of borrowers was used as a measure of borrower character in this research in the form of two indicators that include past repayment timeliness and previous loan default status. A borrower character index was developed using these indicators and taken as the explanatory variable in the regression model. In a bid to measure the two aspects of loan performance which include profitability and credit risk, the loan performance was constructed as a composite variable using Return on Assets (ROA) and Loan Loss Provisions (LLP).

The panel regression model was specified as:

$$Y_{it}=1.012+0.912X_{2it}+\mu i+\epsilon_{it}$$

Where:

- Y_{it}= Loan performance of bank *i* at time *t*
- X_2it = Borrower Character
- μi = unobserved bank-specific effects
- ϵit = error term

Both the fixed effects (FE) and the random effects (RE) models were initially estimated. The Hausman test showed that the estimator of the fixed effect was more suitable, which means that there were unobservable bank-specific characteristics correlated with the explanatory variables. Thus, fixed effects model was chosen to be interpreted.

Table 7: Panel Data Regression Results for Borrower Character on Loan Performance

Variable	Coefficient	Std. Error	t-statistic	p-value
Constant	1.012	0.132	7.667	0.000
Borrower Character (X_2)	0.912	0.028	32.571	0.000
R^2 (within)	0.84			
F-statistic	1,061.30			0.000

Author (2026)

The regression findings suggest that there is a positive and statistically significant impact of the borrower character on loan performance. The coefficient of the borrower character (= 0.912, p = 0.001) implies that the increase in the loan performance occurs with the increase in the borrower character reflected by the better timeliness of repayments and a decrease in the default history in the case that other unobserved bank-specific effects remain unchanged. With the value of within R 2 equal to 0.84, the model explains the variation in loan performance of banks overtime and it explains the variation in the banks with the explanatory variable being borrower character and the language used is approximately 84 percent. This indicates a high explanatory strength of the model in explaining changes in the performance of loans akin to time considered in the sampled banks. The F-value is statistically significant ($p < 0.001$), which shows that the regression model in its entirety is statistically significant.

Panel Data Regression Analysis for Collateral Requirements on Loan Performance

To determine the influence of the use of collateral requirements on loan performance at Kenyan commercial banks, a panel data regression analysis has been carried out. The panel method was employed to explain the variation in the collateral policies between the banks and time variation in collateral valuation methods with the control of unobserved bank-specific traits.

In the given research, it was possible to operationalize collateral requirements based on the loan-to-collateral ratio (LCR), which reflects the sufficiency of the collateral as compared to the value of the loan. The regression model only used LCR as a continuous indicator of collateral sufficiency. Dependent variable, loan performance, was designed in the form of a composite indicator of Return on Assets (ROA), and Loan Loss Provisions (LLP) which captured the levels of profitability and credit risk.

The panel regression model was specified as.

$$Y_{it}=1.431+0,905X_{3it}+\mu i+\epsilon_{it}$$

Where:

- Y_{it}= Loan performance of bank *i* at time *t*
- X_3it = Collateral Requirements
- μi = unobserved bank-specific effects
- ϵit = error term

The Hausman test showed that the fixed effects estimator was more suitable and that unobserved bank-specific characteristics were related to collateral practices. Thus, interpretation was done by the fixed effects model.

Table 8: Panel Data Regression Results for Collateral Requirements on Loan Performance

Variable	Coefficient	Std. Error	t-statistic	p-value
Constant	1.431	0.146	9.801	0.000
Collateral Requirements (X_3)	0.905	0.03	30.167	0.000
R^2 (within)	0.82			
F-statistic	1,364.50			0.000

Author (2026)

According to the results of the regression, collateral requirements and loan performance have a positive and statistically significant relationship. The coefficient of collateral requirements (0.905, $p < 0.001$) indicates that a positive change in the collateral adequacy in the form of a reduced LCR or an increased collateral value is correlated with a significant increase in the performance of the loan, other things being equal, in the bank. The within R 2 of 0.82 indicates that the model to the changes in loan outcomes in banks over time explains the variation in loan performance of about 82 percent which is the strong explanatory power of collateral adequacy. The F-test value is statistically significant ($p < 0.001$), which proves that the entire regression model can be trusted to give a good estimate of the relationship between collateral requirements and loan performance.

Conclusion of the Study

The study also finds out that borrower character is an important predictor of the performance of loans. Borrowers that have good repayment history in form of past repayment timeliness and past default on loans have better loan performance than those with poor or negative credit records. According to panel data evidence, past behavior of borrowers is a sure indicator of the repayment patterns in the future. Appropriate use of credit reference bureau information helps the banks to overcome information asymmetry, decrease the adverse selection, and improve

the quality of portfolios. The results highlight the need to incorporate the evaluation of the character of the borrower into system credit as a preventive tool in loan defaults.

The authors conclude that collateral requirements are positively and significantly associated with loan performance in the Kenyan commercial banks. Loans backed by sufficient collateral in terms of the loan to collateral ratio (LCR) and collateral value pledged are linked with less risk of default and better recovery rates. The result of the panel regression confirms the use of prudent collateral valuation is effective in maintaining discipline in the loans and safeguarding banks against credit losses. The results however also indicate that collateral by itself, is not a risk mitigation tool that should be used without it being supplemented by a strong borrower capacity and character checks. Collateral works best when incorporated into a comprehensive credit evaluation system as opposed to its use as an alternative to screening borrowers.

Recommendations of the Study

The recommendations presented are based on the findings of the study regarding the influence of borrower character and collateral requirements on loan performance in Kenyan commercial banks.

Management Recommendations

Commercial banks should strengthen borrower character assessment during credit appraisal and loan monitoring. Greater emphasis should be placed on borrowers' repayment history, creditworthiness, and default records through the effective use of Credit Reference Bureau (CRB) information and digital credit scoring systems. Banks should also establish mechanisms that reward borrowers with strong repayment histories through favorable lending terms, thereby encouraging responsible borrowing behavior and reducing default risk.

Policy Recommendations

The study recommends that regulators and financial institutions enhance the quality, accuracy, and accessibility of credit information shared through Credit Reference Bureaus. Improved information sharing will reduce information asymmetry, facilitate more accurate borrower assessment, and promote sound credit allocation decisions. Additionally, regulatory frameworks should support the development of standardized credit evaluation procedures that incorporate borrower character as a key determinant of lending decisions.

Recommendations for Practice and Future Research

Commercial banks should adopt balanced collateral policies that complement, rather than replace, borrower character assessment. Financial institutions should ensure regular collateral valuation and monitoring to maintain adequate security coverage throughout the loan period. Furthermore, banks should diversify acceptable forms of collateral, including movable assets and alternative security instruments, to improve access to credit while maintaining prudent risk management practices.

Future studies should examine the influence of borrower character and collateral requirements on loan performance under different economic conditions and across other financial institutions to provide broader evidence on effective credit assessment practices.

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