

CREDIT RISK MANAGEMENT PRACTICES AND PERFORMANCE OF MORTGAGE LOANS IN TIER ONE COMMERCIAL BANKS IN KENYA

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International Academic Journal of Economics and Finance (IAJEF) | ISSN 2518-2366

Received: 18th September 2026

Published: 15th October 2026

Full Length Research

Available Online at: https://iajournals.org/articles/iajef_v6_i1_169_185.pdf

Citation: Tanui, L. K., Aluoch, M. O. (2026). Credit risk management practices and performance of mortgage loans in tier one commercial banks in Kenya. *International Academic Journal of Economics and Finance*, 6(1), 169-185.

ABSTRACT

Tier One commercial banks dominate Kenya's mortgage market, accounting for approximately 89.9 per cent of the outstanding mortgage portfolio, yet mortgage loan performance remains a concern amid rising delinquency and non-performing mortgage loans. This study examined the effect of credit risk management practices on mortgage loan performance among Tier One commercial banks in Kenya. The study focused on credit appraisal management, collateral management, loan monitoring management, and loan recovery management practices. Guided by Asymmetric Information Theory, Credit Rationing Theory, Credit Risk Theory, and Financial Intermediation Theory, the study adopted a cross-sectional survey design targeting 45 officers across the nine Tier One commercial banks in Kenya using a census approach and primary data collected through structured questionnaires. Using robust multiple linear regression analysis in Stata 18, the findings established that credit appraisal management practices ($\beta = 0.380$, $p = 0.001$), collateral management practices ($\beta = 0.373$, $p = 0.003$), and loan recovery management practices ($\beta =$

0.312 , $p = 0.019$) positively and significantly influenced mortgage loan performance. Conversely, loan monitoring management practices ($\beta = -0.381$, $p = 0.001$) had a negative and statistically significant effect, suggesting that intensified monitoring was more prevalent in mortgage portfolios already experiencing elevated credit risk. The study concludes that effective credit appraisal, collateral management, and loan recovery practices are important for improving mortgage loan performance and recommends strengthening borrower appraisal and collateral management systems, adopting proactive loan monitoring mechanisms, and reinforcing structured loan recovery frameworks to improve mortgage portfolio quality and reduce non-performing mortgage loans.

Key words: Credit risk management practices, credit appraisal management, collateral management, loan monitoring management, loan recovery management, mortgage loan performance.

INTRODUCTION

Mortgage loan performance has increasingly become an important concern in the banking sector because of its implications for loan portfolio quality, profitability, financial stability, and sustainable housing finance. Globally, mortgage lending represents an important form of long-term financing that promotes home ownership, supports real estate development, and strengthens financial intermediation. Developed mortgage markets such as those of the United States, Canada, the United Kingdom, and Germany continue to play an important role in economic development, while emerging economies such as China, India, and Malaysia have experienced growing demand for housing finance. Despite this growth, rising borrowing costs and repayment difficulties continue to affect mortgage loan performance across countries (World Bank, 2024; International Monetary Fund, 2024). Similar challenges have been observed in Africa, where mortgage markets are expanding but remain characterized by varying levels of development and increasing concerns over mortgage defaults and non-performing loans (African Development Bank, 2024; Centre for Affordable Housing Finance in Africa, 2024).

In Kenya, mortgage financing has continued to expand, with outstanding mortgage loans reaching KSh 279.3 billion by December 2024, up from KSh 270.4 billion in 2023. Nine institutions accounted for 89.9% of mortgage lending in 2024: eight large banks and one medium-sized bank. Despite this expansion, non-performing mortgage loans rose from KSh 39.9 billion in 2023 to KSh 46.0 billion in 2024, and the non-performing mortgage ratio increased from 14.4% to 16.5% (Central Bank of Kenya, 2025). Rising credit distress amid portfolio growth underscores the need for effective credit risk management in institutions active in the mortgage market.

The study therefore emphasized the role of credit risk management practices in improving mortgage loan performance among Tier One commercial banks in Kenya. Credit risk management was conceptualized through credit appraisal management, collateral management, loan monitoring management, and loan recovery management practices, representing key stages of mortgage credit management before and after loan disbursement (Mishkin, 2022). Credit appraisal enables banks to evaluate borrower creditworthiness and repayment capacity, while collateral management provides mechanisms for securing mortgage exposures. Loan monitoring facilitates the identification of emerging repayment difficulties after disbursement, whereas loan recovery provides mechanisms for managing delinquent and defaulted facilities. Mortgage loan performance was assessed through loan repayment, delinquency levels, default rates, recovery of delinquent loans, and overall mortgage portfolio quality. By examining these practices collectively, the study provides evidence on how credit risk management can strengthen mortgage portfolio quality, reduce credit losses, and support the sustainability and stability of mortgage lending among Tier One commercial banks in Kenya.

Statement of the Problem

Mortgage lending supports home ownership, real estate development, and long-term intermediation within the banking sector. Kenya's outstanding mortgage portfolio stood at KSh 279.3 billion in December 2024; nine institutions accounted for 89.9% of mortgage lending (Central Bank of Kenya, 2025). Despite the importance of these lenders, persistent repayment difficulties and deteriorating mortgage asset quality raise questions about whether their existing credit risk management practices protect the portfolio adequately. The concentration of mortgage activity means that weaknesses in appraisal, collateral administration, monitoring, or recovery at major lenders could affect a substantial share of the market.

Non-performing mortgage loans increased from KSh 39.9 billion in December 2023 to KSh 46.0 billion in December 2024, while their ratio to gross mortgage loans rose from 14.4% to 16.5% (Central Bank of Kenya, 2025). The deterioration occurred alongside growth in outstanding mortgage lending. It therefore warrants separate examination of the practices that banks apply at different stages of the credit cycle: assessing borrowers before lending, managing pledged property, tracking repayment after disbursement, and recovering troubled exposures. The association between these practices and mortgage loan performance among the banks examined in this study is the central empirical problem.

Existing studies provide relevant but incomplete evidence. Obae and Jagongo (2022) linked client appraisal and credit rationing to general loan performance in Kenya. Owich and Mutswenje (2022) considered periodic review, collateral, and delinquency warning signs among Kenyan banks, while Riro and Mbuva (2023) examined customer credit checks, risk assessment, and credit policy compliance among listed banks. More directly, Ngigi et al. (2021) studied mortgage-lending banks using secondary panel data from 2012 to 2018 and considered delinquency, value at risk, and credit history scores. Evidence from Tanzania, Uganda, Vietnam, and Zambia likewise examines screening, monitoring, appraisal, and macroeconomic conditions in relation to loan outcomes (Bwana & Moses, 2024; Chibawe & Haabazoka, 2025; Lanyero et al., 2024; Mwakujonga & Komba, 2024; Ven & Khoa, 2024). Yet those designs, portfolios, and settings do not jointly assess the four practices through officers directly engaged in the Kenyan mortgage lending process. This study addresses that narrower question using primary survey data, while recognising that its cross-sectional design identifies associations rather than causal effects.

Objectives of the Study

To achieve the purpose of the research, the following objectives guided the study.

General Objective

The general objective was to determine the effect of credit risk management practices on the performance of mortgage loans in Tier One Commercial Banks in Kenya.

Specific Objectives

- i. To ascertain the effect of credit appraisal management practices on the performance of mortgage loans in Kenyan Tier One Commercial Banks.
- ii. To determine the effect of collateral management practices on the performance of mortgage loans in Kenyan Tier One Commercial Banks.
- iii. To assess the effect of loan monitoring management practices on the performance of mortgage loans in Kenyan Tier One Commercial Banks.
- iv. To evaluate the effect of loan recovery management practices on the performance of mortgage loans in Kenyan Tier One Commercial Banks.

Research Hypotheses

H₀₁: Credit appraisal management practices have no significant relationship with mortgage loan performance among the surveyed commercial banks in Kenya.

H₀₂: Collateral management practices have no significant relationship with mortgage loan performance among the surveyed commercial banks in Kenya.

H₀₃: Loan monitoring management practices have no significant relationship with mortgage loan performance among the surveyed commercial banks in Kenya.

H₀₄: Loan recovery management practices have no significant relationship with mortgage loan performance among the surveyed commercial banks in Kenya.

LITERATURE REVIEW

This section reviews the theoretical foundations and empirical evidence on credit appraisal, collateral management, loan monitoring, and loan recovery in relation to mortgage loan performance. It then presents the conceptual framework that links the four practices to the study outcome.

Theoretical Review

Asymmetric Information Theory

George Akerlof developed the foundational account of asymmetric information in 1970 to explain how unequal knowledge between buyers and sellers can affect market outcomes. Borrowers may hold more information about their financial position, repayment capacity, and willingness to repay than lenders. Before a mortgage is approved, this imbalance can produce adverse selection if applicants with different levels of risk appear similar to the bank (Akerlof, 1970). Borrower screening, verification of earnings, review of credit history, and repayment-capacity assessment provide information that may reduce uncertainty. Kenyan evidence links client appraisal to general loan performance (Obae & Jagongo, 2022), while research on Vietnamese banks considers borrower capacity and loan purpose as dimensions of appraisal (Ven & Khoa, 2024). In this study, the theory provides the rationale for examining credit appraisal management as a separate predictor of reported mortgage loan performance.

Credit Rationing Theory

Stiglitz and Weiss (1981) explained why banks may ration credit when interest rates cannot adequately distinguish borrower risks. Raising rates may change the composition or behaviour of applicants, so lenders also screen borrowers and impose conditions when making credit decisions. For a mortgage, the valuation, legal status, adequacy, documentation, and subsequent review of pledged property are particularly relevant because the loan may remain outstanding for many years. Collateral cannot eliminate the risk of default, but it can affect a lender's exposure if repayment fails. Owich and Mutswenje (2022) examined the role of collateral in general loan performance among Kenyan banks; Ven and Khoa (2024) incorporated collateral into the appraisal of Vietnamese bank loans. The present study isolates collateral management from initial borrower appraisal and tests its association with the performance of mortgage loans.

Credit Risk Theory

Merton (1974) developed a structural account of default risk in relation to the value of a borrower's assets and obligations. Although a household mortgage is not identical to corporate debt, the theory highlights why lenders must consider changing borrower and asset conditions after origination. Mortgage accounts can deteriorate because of missed instalments, income shocks, interest-rate changes, or a decline in the value or recoverability of security. Ongoing review may detect emerging arrears, whereas recovery practices address facilities that have already become distressed. Evidence on Kenyan banking associates periodic loan review and early-warning information with general loan outcomes (Owich & Mutswenje, 2022). Studies in Tanzania and Uganda separately assess monitoring and assessment in their own lending environments (Lanyero et al., 2024; Mwakujonga & Komba, 2024). This perspective motivates the distinct measures of loan monitoring and loan recovery used in the present paper.

Financial Intermediation Theory

Gurley and Shaw (1960) described financial intermediation as the movement of funds from surplus to deficit units through financial institutions. Banks' capacity to mobilise deposits and extend long-term mortgages depends in part on the quality of the loans they originate and manage. Sustained delinquency ties up funds, reduces cash inflows, and may constrain subsequent credit supply. Mortgage lending therefore needs to be assessed both by new lending and by repayment and portfolio quality. Kenya's outstanding mortgage loans increased in 2024, yet the non-performing mortgage ratio also rose (Central Bank of Kenya, 2025). This coexistence of growth and deterioration shows why a large loan book should not automatically be interpreted as strong loan performance. Financial Intermediation Theory consequently provides the broader banking rationale for examining the association between credit risk management practices and mortgage loan performance.

Empirical Literature Review

This section reviews empirical evidence on the relationship between credit risk management practices and mortgage loan performance. The review focuses on credit appraisal management, collateral management, loan monitoring management, and loan recovery management practices, drawing evidence from Kenya, other African countries, and international contexts to identify conceptual, methodological, contextual, and geographical gaps addressed by the study.

Credit Appraisal Management and Mortgage Loan Performance

Evidence on credit appraisal has considered several stages of borrower screening, including credit history checks, verification of income, assessment of capacity to repay, and evaluation of the proposed use of the loan. In Kenya, Obae and Jagongo (2022) analysed credit management and performance of commercial-bank loans and reported statistically significant roles for credit rationing and client appraisal. Riro and Mbuva (2023) examined the joint influence of customer credit checks, credit risk assessment, and compliance with credit policy among commercial banks listed at the Nairobi Securities Exchange; their broader measure of credit evaluation was associated with loan performance. Ngui (2024) assessed financial statement analysis, collateral evaluation, and credit history examination at Kenya Commercial Bank, supplying institution-specific evidence on the appraisal process. In Tanzania, Bwana and Moses (2024) examined credit reference bureau procedures and found significant associations between lending procedures and loan portfolio performance. Ven and Khoa (2024) studied appraisal among Vietnamese commercial banks, considering borrower characteristics, repayment ability, loan purpose, and collateral. These studies help establish that appraisal has several measurable components, but their outcomes concern general commercial-bank lending rather than a specifically defined mortgage portfolio. Ngigi et al. (2021) investigated Kenyan mortgage lending, though their analysis relied on historical bank-level data and focused on delinquency, value at risk, and the moderating role of credit history. The current study therefore asks whether officers' assessments of credit appraisal management are associated with mortgage loan performance in the banks under study. Its questionnaire evidence complements, rather than replaces, portfolio-level evidence.

Collateral Management and Mortgage Loan Performance

Collateral management extends beyond requiring a property at loan origination. It includes establishing ownership, obtaining an appropriate valuation, assessing loan-to-value adequacy, registering and preserving the security interest, keeping documents complete, and reviewing the property's value and legal status during the life of the mortgage. The Central Bank of Kenya (2025) reported that most mortgage lenders set maximum loan-to-value ratios below 90% of property value in 2024, showing the practical relevance of security coverage. In their study of Kenyan commercial banks, Owich and Mutswenje (2022) assessed collateral alongside credit assessment, periodic review, and early-warning signals in relation to general loan performance. Ven and Khoa (2024) treated collateral as one component of credit appraisal in Vietnamese commercial banks. These approaches indicate that security is considered in credit decisions, but do not isolate the

ongoing management of collateral for long-term Kenyan mortgage facilities. A property valued at origination may cease to provide the expected protection if valuations become stale, documentation is deficient, or enforcement is delayed. This study therefore measures collateral management separately from appraisal and examines its relationship with mortgage repayment, default, and perceived portfolio quality. The cross-sectional results should be interpreted as associations, since better-performing banks may also have more resources to administer collateral effectively.

Loan Monitoring and Mortgage Loan Performance

Loan monitoring involves reviewing repayment accounts, identifying early warning signals, contacting borrowers, and intervening before an instalment problem becomes a persistent default. Its timing is important: monitoring undertaken before distress can help prevent arrears, whereas additional monitoring triggered by an already distressed account may coincide with poor observed performance. Owich and Mutswenje (2022) examined periodic review and warning signs of delinquency among Kenyan commercial banks. In a study of selected Tanzanian microfinance institutions, Mwakujonga and Komba (2024) identified monitoring and supervision among practices associated with loan performance. Lanyero et al. (2024) analysed credit assessment and monitoring among banks in Lira City, Uganda, while Bwana and Moses (2024) discussed screening and continuing oversight through credit reference bureau procedures in Tanzania. The geographical settings and loan products in these studies differ from Kenyan mortgages, which generally involve substantial exposures and extended repayment periods. Moreover, evidence of a positive monitoring relationship elsewhere does not imply that all monitoring measures will have a positive cross-sectional coefficient. In the present study, monitoring is analysed as an independent practice. A negative estimate is assessed cautiously because the questionnaire cannot establish whether monitoring preceded deterioration or was intensified in response to it.

Loan Recovery and Mortgage Loan Performance

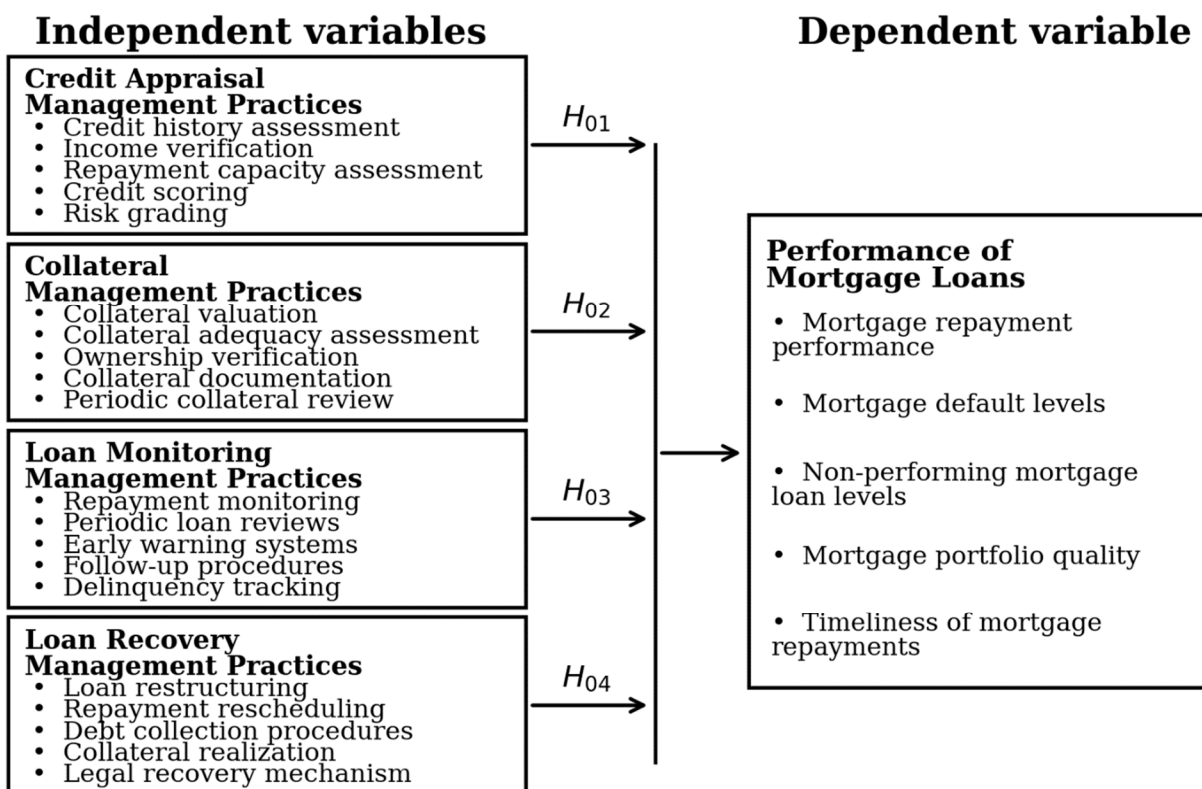
Recovery becomes central when a mortgage account has entered arrears or default. Potential responses include early contact with the borrower, a documented repayment arrangement, restructuring or rescheduling where viable, debt collection, and, where necessary, realisation of security or legal enforcement. These responses differ in timing, cost, and their implications for ultimate recovery. Obae and Jagongo (2022) discussed debt collection in their study of Kenyan commercial-bank loan performance. Owich and Mutswenje (2022) examined a wider set of debt management practices but did not isolate mortgage recovery as the sole outcome of interest. Chege (2024) investigated proactive, reactive, and third-party debt recovery strategies among Tier I banks in Kenya, providing more direct evidence about alternative approaches to recovery, though the outcome was general loan performance. Ngigi et al. (2021) analysed mortgage credit risk and performance using audited historical bank data, which did not directly capture officers' assessment of particular recovery procedures. Regional evidence on screening and monitoring (Bwana & Moses, 2024; Lanyero et al., 2024) also offers less direct insight into the recovery of long-term,

property-secured Kenyan loans. The present study consequently measures recovery management independently, rather than assuming that a bank with strong initial appraisal necessarily has effective workout arrangements. It examines whether more developed recovery practices are associated with better reported mortgage loan performance, while recognising that recovery work is often concentrated in portfolios already facing repayment problems.

Conceptual Framework

Figure 1 presents the conceptual framework illustrating the relationship between credit risk management practices and mortgage loan performance among Tier One commercial banks in Kenya.

Figure 1. Conceptual framework



Source: Authors (2026).

RESEARCH METHODOLOGY

The study adopted a cross-sectional survey research design, which was considered appropriate for collecting data at a specific point in time and examining the relationships between credit risk management practices and mortgage loan performance. The study focused on mortgage lending operations during the 2025 financial year, enabling respondents to provide current information on

credit risk management practices and mortgage loan performance. Mortgage loan performance was operationalized through mortgage repayment performance, default levels, non-performing mortgage loans, mortgage portfolio quality, and timeliness of repayments. Credit risk management practices were measured through credit appraisal management, collateral management, loan monitoring management, and loan recovery management practices. The relationship was estimated using a multiple linear regression model specified as $PML = \beta_0 + \beta_1CAMP + \beta_2COLMP + \beta_3LMMP + \beta_4LRMP + \varepsilon$.

The target population comprised 45 officers drawn from nine Tier One commercial banks in Kenya, which collectively accounted for approximately 89.9 per cent of the country's outstanding mortgage portfolio (Central Bank of Kenya, 2025). The study targeted officers actively involved in mortgage lending. A census approach was adopted because the target population was small and manageable, thereby including all eligible respondents and minimizing sampling error. The unit of analysis was the Tier One commercial bank, while the units of observation were the individual officers involved in mortgage lending activities. Five officers were targeted from each bank: one credit appraisal officer, one mortgage loan processing officer, one mortgage relationship officer, one loan monitoring officer and one loan recovery officer. These respondents represented the major stages of the mortgage lending process and were therefore considered appropriate for providing first-hand information on credit risk management practices and mortgage loan performance.

Primary data were collected using a structured questionnaire comprising predominantly closed-ended Likert-scale items. A pilot test involving five officers from commercial banks engaged in mortgage lending but excluded from the main study was conducted to improve the clarity, relevance, sequencing, and completeness of the research instrument. Content validity was established through expert review, while face validity was assessed during pilot testing, and internal consistency was evaluated using Cronbach's Alpha. Data were analyzed through descriptive statistics comprising frequencies, percentages, means, and standard deviations, while inferential analysis involved multiple linear regression at the 5 per cent significance level. Diagnostic tests were conducted for normality using the Shapiro-Wilk test, multicollinearity using variance inflation factors and tolerance values, heteroscedasticity using the Breusch-Pagan test, and model specification using the Ramsey RESET test. Where heteroscedasticity was detected, robust standard errors were applied to enhance the reliability of statistical inference.

RESEARCH FINDINGS AND DISCUSSION

Reliability and Validity Results

Table 1 presents the reliability and validity results. The study established the reliability and validity of the research instrument before conducting the main analysis. All study constructs achieved Cronbach's Alpha coefficients above the recommended threshold of 0.70, ranging from 0.769 for

loan recovery management practices to 0.853 for mortgage loan performance, confirming satisfactory internal consistency. Construct validity was further supported by a Kaiser-Meyer-Olkin statistic of 0.632 and a statistically significant Bartlett's Test of Sphericity ($\chi^2 = 562.964$, $df = 300$, $p < 0.001$), indicating adequate correlations among the questionnaire items for factor analysis. The study obtained 38 usable questionnaires, providing adequate data for subsequent statistical analysis.

Table 1. Reliability and validity results

Measure	Result
Cronbach's Alpha Range	0.769–0.853
KMO Statistic	0.632
Bartlett's Test, χ^2 (df = 300)	562.964
Bartlett's Test Significance	<0.001
Usable Responses	38

Source: Study survey data (2026).

The results confirmed that the measurement scales possessed satisfactory reliability and construct validity. Credit appraisal management practices recorded $\alpha = 0.846$, collateral management practices $\alpha = 0.817$, loan monitoring management practices $\alpha = 0.850$, loan recovery management practices $\alpha = 0.769$, and mortgage loan performance $\alpha = 0.853$. Accordingly, all constructs were retained for subsequent analysis.

Descriptive and Diagnostic Results

Table 2 presents the descriptive statistics for the study variables. Descriptive findings showed relatively high implementation of credit risk management practices among the participating Tier One commercial banks. Credit appraisal management practices recorded the highest mean ($M = 4.037$, $SD = 0.593$), followed by collateral management practices ($M = 3.926$, $SD = 0.567$), loan monitoring management practices ($M = 3.900$, $SD = 0.571$), and loan recovery management practices ($M = 3.811$, $SD = 0.526$). Mortgage loan performance recorded a mean of 3.895 ($SD = 0.622$), indicating generally favourable perceptions of mortgage portfolio performance among respondents.

Table 2. Descriptive statistics

Variable	Mean	Std. Dev.
Credit Appraisal Management Practices	4.037	0.593
Collateral Management Practices	3.926	0.567
Loan Monitoring Management Practices	3.900	0.571
Loan Recovery Management Practices	3.811	0.526
Mortgage Loan Performance	3.895	0.622

Source: Study survey data (2026).

Table 3 presents the diagnostic test results. Diagnostic tests established that the regression assumptions were largely satisfied. Variance Inflation Factor values ranged from 1.04 to 1.21, with a mean VIF of 1.13, confirming the absence of multicollinearity. The Shapiro-Wilk test indicated that the regression residuals did not significantly depart from normality ($W = 0.9688$, $p = 0.3603$), while the Ramsey RESET test indicated no evidence of model misspecification ($F = 1.16$, $p = 0.3424$). However, the Breusch-Pagan/Cook-Weisberg test detected heteroscedasticity ($\chi^2 = 4.54$, $p = 0.0331$); consequently, heteroscedasticity-robust standard errors were applied in the final regression model.

Table 3. Diagnostic tests

Diagnostic Test	Result	Interpretation
VIF Range	1.04–1.21	No multicollinearity
Mean VIF	1.13	No multicollinearity
Shapiro-Wilk Test	$p = 0.3603$	Residual normality supported
Breusch-Pagan/Cook-Weisberg	$p = 0.0331$	Heteroscedasticity detected
Ramsey RESET	$p = 0.3424$	Model adequately specified

Source: Study survey data (2026).

Correlation and Regression Results

Table 4 presents the correlation results between the credit risk management practices and mortgage loan performance. Pearson correlation analysis established that credit appraisal management practices ($r = 0.538$, $p = 0.0005$), collateral management practices ($r = 0.453$, $p = 0.0043$), and loan recovery management practices ($r = 0.523$, $p = 0.0008$) had positive and statistically significant relationships with mortgage loan performance. Conversely, loan monitoring management practices had a negative and statistically significant relationship with mortgage loan performance ($r = -0.573$, $p = 0.0002$). Correlations among the independent variables remained relatively low, further supporting the absence of multicollinearity.

Table 4. Correlations with mortgage loan performance

Credit Risk Management Practice	Correlation with Mortgage Loan Performance
Credit Appraisal Management Practices	0.538*
Collateral Management Practices	0.453*
Loan Monitoring Management Practices	-0.573*
Loan Recovery Management Practices	0.523*

* $p < .05$.

Source: Study survey data (2026).

Table 5 presents the robust multiple linear regression results. The robust multiple linear regression model was statistically significant ($F(4,33) = 23.29$, $p < 0.001$) and explained 68.8 per cent of the variation in mortgage loan performance ($R^2 = 0.6878$). Credit appraisal management practices had

a positive and statistically significant effect on mortgage loan performance ($\beta = 0.380$, $p = 0.001$), while collateral management practices similarly had a positive and significant effect ($\beta = 0.373$, $p = 0.003$). Loan recovery management practices also positively and significantly affected mortgage loan performance ($\beta = 0.312$, $p = 0.019$). In contrast, loan monitoring management practices exhibited a negative and statistically significant effect ($\beta = -0.381$, $p = 0.001$).

Table 5. Robust multiple linear regression

Variable	Coefficient (β)	Robust Std. Error	p-value
Credit Appraisal Management Practices	0.380	0.100	0.001
Collateral Management Practices	0.373	0.115	0.003
Loan Monitoring Management Practices	-0.381	0.110	0.001
Loan Recovery Management Practices	0.312	0.126	0.019
Constant	1.189	0.871	0.181
R ²	0.6878		
F(4,33)	23.29		<0.001

Source: Study survey data (2026).

The findings indicate that strengthening borrower appraisal, collateral management, and loan recovery practices is associated with improved mortgage loan performance. The positive effect of credit appraisal supports Asymmetric Information Theory by demonstrating the importance of borrower screening in reducing information-related lending risk, while the positive effect of collateral management is consistent with Credit Rationing Theory and the role of collateral in mitigating potential losses. The positive effect of loan recovery management further supports Credit Risk Theory by demonstrating the importance of structured recovery mechanisms in managing delinquent mortgage facilities.

The negative effect of loan monitoring management practices requires a different interpretation. Rather than indicating that monitoring itself worsens mortgage loan performance, the finding may reflect the reactive nature of monitoring within the sampled banks, whereby intensified monitoring is directed towards mortgage accounts already experiencing repayment difficulties. Consequently, poorer-performing mortgage portfolios may attract greater monitoring effort, producing the observed negative association. This finding contrasts with previous studies reporting positive effects of monitoring on loan performance (Lanyero et al., 2024; Mwakujonga & Komba, 2024; Owich & Mutswenje, 2022) and suggests the importance of shifting from predominantly corrective monitoring towards proactive early-warning and preventive monitoring mechanisms.

Hypothesis Testing

Table 6 matches the four null hypotheses stated after the specific objectives to the robust regression coefficients and their p values. All four null hypotheses were rejected at the 5% level. The

coefficients for credit appraisal, collateral management, and loan recovery were positive, while the coefficient for loan monitoring was negative.

Table 6. Hypothesis testing decisions

Hypothesis	B	p	Decision ($\alpha = .05$)
H ₀₁ : Credit appraisal	0.380	0.001	Reject H ₀₁
H ₀₂ : Collateral management	0.373	0.003	Reject H ₀₂
H ₀₃ : Loan monitoring	-0.381	0.001	Reject H ₀₃
H ₀₄ : Loan recovery	0.312	0.019	Reject H ₀₄

Source: Study survey data (2026).

Overall, the findings demonstrate that credit risk management practices significantly explain mortgage loan performance among Tier One commercial banks in Kenya. Credit appraisal, collateral management, and loan recovery strengthen mortgage loan performance, whereas the negative coefficient for loan monitoring suggests that monitoring may currently be intensified after deterioration in mortgage portfolio quality has already occurred rather than functioning predominantly as a preventive credit risk management mechanism.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Regarding the first objective, the study established that credit appraisal management practices had a positive and statistically significant effect on mortgage loan performance among Tier One commercial banks in Kenya. Effective assessment of borrower credit history, income, repayment capacity, credit scores, and risk profiles enables banks to make more informed lending decisions and reduce exposure to borrower default. Credit appraisal management therefore remains an important mechanism for strengthening mortgage portfolio quality and improving repayment performance.

In relation to the second objective, the study established that collateral management practices had a positive and statistically significant effect on mortgage loan performance. Effective collateral valuation, verification, adequacy assessment, documentation, and periodic review strengthen loan security and provide protection against potential losses arising from borrower default. Collateral management therefore contributes significantly to maintaining mortgage portfolio quality and reducing credit exposure among Tier One commercial banks in Kenya.

Concerning the third objective, the findings revealed that loan monitoring management practices had a negative and statistically significant effect on mortgage loan performance. The negative relationship does not necessarily imply that monitoring reduces mortgage loan performance but suggests that banks intensify monitoring when mortgage accounts are already experiencing

repayment difficulties. This indicates that monitoring within the sampled banks may be predominantly reactive rather than preventive. Loan monitoring therefore remains an important credit risk management mechanism, but its effectiveness in improving mortgage loan performance depends on early identification of repayment difficulties and timely intervention before mortgage accounts deteriorate into delinquency or default.

Regarding the fourth objective, the study established that loan recovery management practices had a positive and statistically significant effect on mortgage loan performance. Effective loan restructuring, repayment rescheduling, debt collection, collateral realization, and legal recovery mechanisms enable banks to manage delinquent mortgage facilities and minimize credit losses. Loan recovery management therefore contributes to improved mortgage portfolio quality and supports the sustainability of mortgage lending among Tier One commercial banks in Kenya.

Policy Implications and Recommendations

Regarding the first objective, the positive effect of credit appraisal management practices supports the recommendation that Tier One commercial banks should strengthen borrower appraisal systems through comprehensive credit history assessment, rigorous income verification, repayment capacity analysis, credit scoring, and borrower risk grading. Banks should periodically review their appraisal criteria to reflect changing borrower and mortgage-market risk conditions. The Central Bank of Kenya should continue strengthening supervisory guidance on mortgage credit appraisal to encourage prudent lending standards and reduce the entry of high-risk facilities into mortgage portfolios.

In relation to the second objective, the positive effect of collateral management practices suggests that commercial banks should institutionalize comprehensive collateral management systems covering accurate property valuation, ownership verification, assessment of collateral adequacy, proper documentation, and periodic review of collateral values. Periodic revaluation is particularly important because changes in property values may alter the protection available to lenders throughout the mortgage term. The Central Bank of Kenya should promote consistent collateral valuation and management standards across commercial banks to strengthen mortgage credit risk management and portfolio quality.

Concerning the third objective, the negative effect of loan monitoring management practices highlights the need for commercial banks to shift from predominantly reactive monitoring towards proactive mortgage portfolio surveillance. Banks should strengthen repayment tracking, early-warning systems, periodic loan account reviews, borrower follow-up, and timely identification of emerging delinquency before repayment difficulties become severe. Digital monitoring systems and predictive credit risk analytics may further support earlier identification of deteriorating mortgage accounts. The Kenya Bankers Association should facilitate sharing of effective mortgage monitoring and early-risk detection practices among member institutions.

Regarding the fourth objective, the positive effect of loan recovery management practices supports the recommendation that commercial banks should strengthen structured recovery frameworks incorporating timely borrower engagement, loan restructuring, repayment rescheduling, debt collection, collateral realization, and legal recovery where necessary. Banks should prioritize early engagement with distressed borrowers and appropriate restructuring or rescheduling where viable before accounts deteriorate further. Policymakers and financial-sector regulators should also support efficient collateral realization, foreclosure, and debt recovery frameworks to reduce recovery delays, minimize credit losses, and strengthen the sustainability of Kenya's mortgage market.

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