

## Effect of Credit Monitoring Practices on Loan Nonperformance among Microfinance Institutions in Nairobi County, Kenya

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### ABSTRACT

*The Kenyan microfinance industry faces many challenges. Studies point to nonperforming loans as one of the main problems facing microfinance institutions in Kenya, which has led to reduced profitability and institutional collapse in some cases. Noncompliance with credit monitoring and loan policy provisions have been cited as some of the factors leading to increased nonperforming loans. The main objective was to determine the effect of credit monitoring on nonperforming loans among microfinance institutions in Nairobi County. Information Asymmetry theory guided the study. The study's main goal was to assess how credit management methods in Nairobi County's microfinance institutions influence the amount of nonperforming loans. The study employed correlation research design where a quantitative approach was adopted. Stratified proportionate random sampling was adopted where data was obtained from 48 microfinance institutions in Nairobi County. The population constituted 192 respondents comprising general managers, credit managers, finance officers, and accountants. The study sampled 128 staff who responded to questionnaires designed on a 5-point Likert scale. Data were subjected to analysis by use of SPSS, where correlation demonstrated possible relationships of variables while regression predicted the effects of changing variables on the defaulted loans. The study found that there was a positive significant effect of credit monitoring practice ( $\beta = -0.498$ ,  $t = -5.099$ ,  $p < 0.05$ ). The null hypotheses were rejected and alternative hypotheses were accepted that credit monitoring practice had a significant influence on loan nonperformance among microfinance entities in Nairobi County, Kenya. Based on the findings of the study, the researcher recommends that microfinance entities should strengthen credit-monitoring practices to minimize debt writing off and loan nonperformance.*

**Keywords:** Credit Monitoring Practice, Microfinance Institutions, Nonperforming Loans, Nairobi County, Kenya

### I. INTRODUCTION

According to Microfinance Act (2008), nonperforming loans refer to all loans in the portfolio that do not generate income for more than 30 days and are disclosed as supplementary financial information. In addition, Manyuanda (2014) describes nonperforming loans as those assets in the organization which are no longer generating income. In addition, Kavata (2016) further describes NPLs as a loan arrangement where the principal amount and accrued interest have both remained unpaid for a predetermined duration of time. The researcher also described nonperforming loans as nonperforming assets. Nonperforming loans reflect how profitable a financial institution is hence, a decreasing percentage of bad loans shows that asset quality of microfinance institutions has improved (Stuti & Bansal, 2017).

According to Selma and Jouini (2017), the Italian, Greek, and Spanish financial institutions experienced loan defaults as a consequence of an increase in actual interest rates. This was particularly the case for credit with variable interest rates since it made it harder for loan consumers to pay off their debts. Development as well as creativity have been hampered in some South East Asian countries by lending firms that had to deal with the build-up of nonperforming credit that reduced their financial reserves (Karim, 2019).

In Zimbabwe, where several financial companies were declared bankrupt, the issue of nonperforming loans is widespread, (Monetary Policy Statement, 2020). According to the Statement of Financial Policy, nonperforming loans

played a substantial role in the downfall of these financial lending firms. Joseph et al. (2020) revealed that outside causes seem to be more prevalent in triggering defaulted loans in the country's microfinance sector. The major factors causing nonperforming loans were found to be mainly, natural disasters, governmental regulations and the borrower's moral character.

The Kenyan microfinance sector is governed by laws such as, the Companies Act, the Banking Act, the Central Bank of Kenya (CBK) Act, and several regulatory directives published by CBK. Microfinance institutions (MFI) are regulated by CBK. The banking sector in Kenya was liberalized in the nineties with the elimination of currency restrictions. The Central Bank, which reports to the Cabinet Secretary National Treasury, is in charge of creating and carrying out fiscal policies as well as promoting the availability of funds, financial system stability, and effective operation. The Central Bank of Kenya as part of its regulatory role annually issues publications on key financial indicators on Kenya's Microfinance firms, such as, capitalization, assets, loan default levels and costs of credit. Thus, the primary Kenyan authority supervising microfinance institutions is the Central Bank. In Nairobi County today there are 48 institutions conducting microfinance services of which 14 of them are Microfinance institutions, 5 are banks conducting microfinance services, 3 are wholesale microfinances and 26 are retail MFIs (Nairobi City County, 2021).

### 1.1 Statement of the Problem

The microfinance sector of Kenya has lagged behind in profitability primarily caused by increasing nonperforming loans (MFI, 2020). The weak credit management, which is based on credit monitoring, credit appraisal processes and risk control provisions, has led to the collapse of microfinance institutions (CBK Annual Report, 2018). Inadequate credit appraisal, poor risk monitoring, low ethical standards of the clients causes an increase in nonperforming loans in microfinance institutions leading to significant decline in their loan portfolio, by raising the interest rates borrowers are made to pay, which results in an increase in bad loans. The cases of loan nonperformance have raised queries on efficiency of credit appraisal as well as credit monitoring initiatives by microfinance institutions. This has further led to queries on credit risk assessment practices. Various researches have been done regarding nonperforming loans in the commercial banks of Kenya and not microfinance institutions with various theories about what factors influence non-performing loans held by commercial lenders. Gakure et al. (2012). conducted a study on how guidelines for approving loans and supervising of the borrowers influence nonperforming loans in microfinance banks, indicating a positive significant impact. In order to examine the influence of credit data exchange on nonperforming loans, Kwambai and Wandera (2017) conducted an investigation on Kenyan commercial bank rather than microfinance organizations. In addition, Billy (2016) argued that weak credit assessment was a contributing factor, and most banks were looking at a substantial rise of nonperforming loans in Kenya. Fawad and Taqadus (2017) recommended a further study on credit Monitoring practices of monitoring practices on loan nonperformance among micro lending entities.

### 1.2 Objectives of the Study

To determine the effect of Credit monitoring on loan nonperformance among microfinance institutions in Nairobi County

### 1.3 Research Hypothesis

$H_{01}$ : Credit monitoring has no discernible influence on loan nonperformance among microfinance institutions in Nairobi County.

## II. LITERATURE REVIEW

### 2.1 Theoretical Review

This paper is founded on the Information Asymmetry Theory. Akerlof (1970), proposed the concept of Information Asymmetry. The principle of asymmetric information suggests that differentiating between favorable and undesirable consumers may be difficult (Richard, 2016) and due to this, borrowers with unethical tendencies or loan nonpayment issues may not be flagged in time. According to the principle, in a marketplace, the party with more knowledge about a commodity to be exchanged compared to the other side is in a more advantageous position to secure the best conditions for the agreement. In this example, the person borrowing has advantage over the microfinance firm (Richard 2016). Therefore, the side with less knowledge about the same precise thing to be transacted is in a weaker position to decide whether the transaction is made correctly or incorrectly. The amount of nonperforming loans in microfinance institutions has significantly increased as a result of borrowers who withhold critical information during loan appraisal procedures (Beste & Bofondi, 2003). Derban et al. (2005) proposed that creditworthiness assessments be

used by financial firms to evaluate applicants in particular. According to the asymmetric information concept, getting accurate details from potential customers is essential to conducting an efficient vetting.

Both qualitative and quantitative methods are available to evaluate the applicants, but the discretionary character of qualitative approaches presents a significant hurdle. Nevertheless, Derban et al. (2005) claim that numerical scores can be allocated to loan applicants' traits evaluated using no quantitative methods, and the total of the scores can be compared to a benchmark. Such a method lowers operating expenses, decreases subjective evaluations, and potentially prejudices. If the evaluation methods show variations in predicted defaulted loans levels, they will be significant. Gehrig and Stenbacka (2005) came to the conclusion that quantitative approaches allow for the detection and quantification of the variables that are significant in explicating probability of default, assessing the comparative level of significance of the variables, enabling better determination nonpayment risks, weeding out risky borrowers, and trying to calculate any reserve required to satisfy anticipated future nonperforming loans.

The weakness of this theory is that it is not foolproof. Some information may show a client is of good character when in real sense the business is not doing well and in the long run if given credit can underperform. Therefore, to distinguish between good and bad borrowers microfinance institutions would monitor the credit and those seeking the credit before setting appraisal. Microfinance institutions would further check on credit risk control policies before loaning. Microfinance institutions are further guided by Information Asymmetry Theory when setting appraisal to limit credit default. Therefore, Information Asymmetry Theory ends up as the greatest theory guiding this study on determinants of NPL among microfinance institutions.

## 2.2 Conceptual Review

### 2.2.1 Credit Monitoring

To guarantee a solid financial system and avoid structural catastrophes, frequent credit performance assessment, preferably with an advance notification mechanism that can notify financial regulators of impending bank difficulties, is necessary (Agresti et al., 2017). Thus, it is unnecessary to overstate the necessity for keeping a close eye on the consumer in order to guarantee loan repayment. Whenever they feel they received closer follow-ups, borrowers tend to do more to meet their loan obligations unlike when due to less attention defaulting on payments increases. Microfinance Institutions are expected to monitor their borrowers' prompt compliance (Mayers, 2019). This study measured credit monitoring through a continuous assessment of client's activity, creditworthiness during the time of a loan maturity, loan repayment with its key emphasis on credit risk exposure, operating expenses provision, client orientation, credit reporting and credit documentation.

### 2.2.2 Nonperforming Loans

Nonperforming Loans are caused by debtors' failure to pay back their principal and interest when they fall due, which has a negative impact on the creditor's cash flow (Agu & Okoli, 2017). As soon as they are described as nonperforming debt, there is concern that the borrower will not be able to cover the whole amount owed, plus interest (Chelagat, 2020; Awunyo, 2017). Given that nonperforming lending, have a variety of negative impacts, it is crucial to prevent them because, they reduce loaning to financial institutions, households, and other businesses as well as hindering commercial Lending organizations' capacity to be profitable. This claim is supported by data from West Africa (Appiah, 2016; Awunyo, 2020). The amount of loan defaults divided by the entire amount of the loan book will be used to calculate nonperforming loans.

## 2.3 Empirical Review

Dimitrios et al. (2016) used cross sectional data from 9 large Greek banking firms and a generalized method of movement to summarize their survey. Looking at the causes of bad loans in the Greek monetary sector individually for each type of loan, they were persuaded that Finance institutions specific variable Credit Monitoring were also causes of differences in levels of nonperforming loans.

An investigation on Financial Institutions of India that spans 20 years also found that high interest rates and an actual effective exchange rate contributed to increasing nonperforming loans, Dash and Kabra (2019). However, Adela and Iulia (2019) provided the concept utilizing the bivariate correlation on how these financial institutions' average interest rates are related to NPLs in financial institutions system of Romania, encompassing the fifteen years 2006–2019. Their findings indicated significant effects of Credit Monitoring on the nonperforming loans as well.

On the premise of the Auto Regressive Distributed Lag technique, Solarin et al. (2016) collated their conclusions on Malaysia's sharia based financial institutions. They concluded that cost of lending had a considerable long-term substantial effect on loan defaults while Credit Monitoring had a discernible but negligible association with

defaulting loans thus lowering the larger assumption that Sharia compliant microfinance organizations operate on profitability basis since production has a lesser effect compared to the rate of interest.

Applying generalized autoregressive conditioned heteroscedasticity, Saad and Kamran (2020) came to the conclusion that while Credit Monitoring has a considerable though not sole influence on increasing nonperforming loans, other macroeconomic determinants, governmental policies, and the banking practices of the financial institutions need to be thoroughly investigated in order to identify the underlying causes of nonperforming loans.

Joseph et al. (2020) conducted research to determine the reasons why loans in Zimbabwe are not performing. Among financial institutions, loans make up the bulk of assets. The business success of microfinance institutions is greatly influenced by such assets, which produce enormous interest income for the financial institutions. Unfortunately, to the detriment of the microfinance institutions, a portion of these loans typically enters the nonperforming credit category.

Negera (2012) evaluated the factors that contribute to loan delinquencies in Ethiopian financial institutions. Using self-administered questionnaires, a study was done involving staff occupying various offices, who work in both privately held and government financial institutions in Ethiopia. According to the survey's conclusions, the reasons for nonperforming loans include poor credit supervision, poor credit appraisal, flawed loan surveillance, immature credit heritage, lax credit contract terms, assertive lending, malfunctioning administrative frameworks, monopolistic practices among financial institutions, deliberate nonpayment by customers with their limited understanding, misappropriation of funds and inadequate financing by lenders.

In the Guyana's financial industry, Pasha and Khemraj (2019) investigated the factors that contribute to nonperforming credit. Their findings indicate that Gross domestic product and non-performing loans are negatively associated, indicating that a strengthening of the productive sector corresponds to a decline in defaulting loans. Financial organizations that price their loans significantly higher than normal and lend without restrictions stand high chances of loan failure. Credit Monitoring minimize nonperforming loans. In contrast to earlier research, their findings do not back up the idea that larger financial institutions are better at vetting loan applicants than their smaller rivals.

Alshatti (2015) conducted research on 13 business finance institutions from 2005 to 2017 to determine the impact of the nonperforming loan ratio on the profitability. Utilizing cross sectional time series data, the investigation found that credit risk has a direct impact on the economic results of Jordanian financial institutions. Moreover, the capital adequacy ratio, the interbank lending rates, and the debt to equity ratio did not have an impact on the revenue of the financial institutions as determined by Return on equity, indicating that some other parameters may have an influence on the earnings of financial institutions, which is why the present investigation was necessary.

Hasan and Wall (2014) conducted a study conducted between 2003 and 2019 examining the factors that influence financial institutions' provisions for bad loans in 21 different countries sampled from the United States and beyond. Nonperforming loans were among the essential factors, while optional factors were calculated using revenue prior to the provisions for bad loans. The research, applying data analysis methodologies discovered that a significant proportion of Nonperforming loans is associated with greater levels of provisions for bad loans. Although several indicators, including bad debts reflected important factors in United States analyses, they were found insignificant for institutions outside America. This present investigation, which has focused on Nairobi County, aims to determine whether there exists a geographical and situational difference.

### III. METHODOLOGY

This study employed a correlation research method. With a correlation research model, connections among parameters are examined without any of them being under the researcher's direct influence or manipulation (Mugenda, 2013). Correlational research, according to Kothari (2014), is employed to specifically examine a representative sample in order to explain its key features.

The term "population" describes the entire set of the components based on which the investigator hopes to draw conclusions (Cooper & Schindler, 2006). This research involved one general manager, one credit manager, one finance officer and one chief accountant for each of the 48 MFIs hence 192 staff.

The study adopted random sampling to identify the general managers, finance officers, credit managers and accountants summing up to 128 per Krejcie and Morgan sampling method.

Primary data was sought from MFIs under study. Formulation of closed ended questions is easy to administer and easier to analyze (Mwangi, 2015). The researcher was in favor of this instrument because it is easy and economical to use on a large group of respondents. To obtain primary data requires the use of self-administered questionnaires that use the drop off methodology.

To collect data from the target participants, the researcher administered five Likert scale closed ended questionnaires (Saunders, 2019). Secondary data was sought on firm size moderating effect and on non-performing loans. Data was analyzed descriptively by use of means and inferentially by use of correlation and regression analysis. This data was obtained from financial statements of mentioned firms.

Econometric equation;  $Y = \beta_0 + \beta_1 X$

Where:

$Y_{NPLs}$  = Nonperforming Loans,  $\beta_1$  = Regression coefficient,  $X$  = Credit monitoring,  $e$  = error term,  $\beta_0$  = Constant term

## IV. FINDINGS

### 2.1 Credit Monitoring Practice

The participants were provided with a questionnaire to rate the degree to which they agreed or disagreed with the assertions on a Likert scale of 1 to 5, with 1 being strongly disagree, 2 being disagree, 3 being undecided, 4 being agree, and 5 being strongly agree. The results are tabulated in 1 as seen below.

**Table 1**

*Credit Monitoring Practice*

Credit Monitoring Practice	Mean	S.D
The organization conducts background check on clients before loaning.	2.90	.470
In my organization we report client behavior	4.80	.419
In my organization we have established credit documentation to approve and review counterparty credit limits	4.83	.395
In my organization we base on client orientation analysis	4.84	.416
In my organization we continuously monitor client's activity and creditworthiness during the time of a loan maturity	4.06	.724
In my organization we maintain a control system of expenses incurred on loan repayments.	4.47	.670
<b>Average</b>	<b>4.32</b>	<b>.516</b>

Credit monitoring is a continual procedure, and the investigator sought to know how much respondents agreed with different techniques. The respondents were further, asked whether there organization gave loans based on client orientation analysis. In general, it was evident that majority of respondents agreed that client orientation analysis influenced loan performance and it was strongly scored with an average of 4.84 and standard deviation of 0.416. The study found that the organization had established credit documentation to approve and review counterparty credit limits and a large proportion of the participants denied that there existed credit documentation, as demonstrated by a mean of 4.83 and standard deviation of 0.395.

The results of the study additionally showed that the organization reports client behavior. As indicated the respondents agreed that the microfinance firms reported client behavior. The average score is 4.80 while the standard deviation is 0.419. As to whether or not microfinance firms continuously monitor client's activity and creditworthiness during the time of a loan maturity it was established. The average finding was a mean 4.68 with standard deviation of 0.468. In addition, respondents strongly agreed with the assertion that the organization maintains a control system of expenses incurred on loan repayments. Generally the mean value of 4.32 and standard deviation of 0.516 showed that microfinance institution had a Credit Monitoring Practice in place.

These finding agrees with Dimitrios et al. (2016) conducted a study on antecedents of loan nonperformance and revealed that credit monitoring had a considerable favourable influence on the performance of loans. It further agrees with Solarin et al. (2016) who carried out a study on microfinance institutions that are Islamic in Malaysian sector and noted that credit monitoring was proved to be of considerable favourable influence on credit nonperformance. Pasha and Khemraj (2019) established the antecedents of loan nonperformance finance sector in Guyanese and noted that credit monitoring minimize nonperforming loans and therefore had a favourable considerable impact on performing loans. However, this disagrees with Alshatti (2015) who established the influence on NPL ratio on financial performance microfinance entities indicating credit monitoring to be of negative insignificant influence on loan performance. The difference in findings on the disagreed findings was due to use of secondary data on past studies and primary data for the current study.



**Table 2**  
*Correlation Matrix*

		CM	NPL/TL
CM Credit monitoring	Pearson Correlation	1	-.498**
	Sig. (2-tailed)		.000
	N	81	81
NPL/TL NPL to Total loan	Pearson Correlation	-.498**	1
	Sig. (2-tailed)	.000	
	N	81	81

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The correlation coefficient is a statistical numerical indicator of covariation, or connection, involving two variables that reveals both the amount as well as the trajectory of the linear connection (Coopers & Schindler, 2014). A coefficient of correlation of 0.3 or lower indicates an insignificant relationship, 0.3 - 0.5 indicates a mild connection, and higher than 0.5 indicates a high degree of correlation. Correlation values of >0.9 signal the existence of Multicollinearity for independent variables (Henson & Roberts, 2006).

Research data suggests that signs of NPL have a weak correlation with credit monitoring ( $r = -0.498, p < 0.00$ ). This implies unit decrease in credit monitoring led 0.4988 unit increase in nonperforming loans. These findings confine to Dimitrios et al. (2016), who conducted a study on antecedents of loan nonperformance which established that credit monitoring had a considerable negative impact on loan nonperformance. It further agrees with Alshatti (2015) who established the influence on NPL ratio on financial performance microfinance entities indicating credit monitoring to be of negative insignificant influence on loan nonperformance. The findings disagrees with Solarin et al. (2016) who carried out a study on microfinance institutions that are Islamic in Malaysian sector and noted that credit monitoring exerted a considerable positive influence nonperforming loans. Pasha and Khemraj (2019) established the antecedents of loan nonperformance finance sector in Guyanese and noted that credit monitoring minimizes nonperforming loans and therefore carries a positive significant impact on loan performance. These contradicting findings are as a result of most studies using secondary data and different variables.

**Table 3**  
*Regression Results of Credit Monitoring On Loan Nonperformance among Kenyan Microfinance Entities*

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.498 <sup>a</sup>	.248	.238	.91212	.248	26.003	1	79	.000
a. Predictors: (Constant), Credit monitoring									
ANOVA <sup>b</sup>									
Model	Sum of Squares		df	Mean Square	F	Sig.			
1	Regression	21.633	1	21.633	26.003	.000 <sup>a</sup>			
	Residual	65.725	79	.832					
	Total	87.358	80						
a. Predictors: (Constant), Credit monitoring; b. Dependent Variable: Total loan to NPL 2017-2021									
Coefficients <sup>a</sup>									
Model	Unstandardized Coefficients			Standardized Coefficients		t	Sig.		
	B	Std. Error		Beta					
1	(Constant)	7.309	.774			9.441	.000		
	Credit monitoring	-.929	.182		-.498	-5.099	.000		
a. Dependent Variable: TL to NPL 2017-2021									

Table 3 reveals a slightly positive and substantial association involving credit monitoring and loan nonperformance among Kenyan microfinance entities. The correlation coefficient (R) of 0.498 means a significant positive link between Credit monitoring and loan nonperformance. The coefficient of determination, R-square of 0.248 suggests that Credit monitoring techniques explains 25% of the variance in loan nonperformance among Kenyan microfinance entities in Nairobi at 5% significance level and 95% confidence level.

According to the ANOVA outcome,  $F=26.003$   $p=0.000$ , meaning it is below the p-value of 0.05. The findings show that the entire regression model was of significance when assessing application of the model for measuring the research variables. Hence there is a good match between credit monitoring and loan nonperformance among Kenyan microfinance entities. As a result, using a regression model to either approve or disregard the study's hypothesis is justifiable. The regression equation to estimate the degree of loan nonperformance stated as:

$$Y = 7.309 - 0.929X + 0.774$$

From the regression equation, when credit monitoring changes by 1 unit, loan nonperformance changes by -0.929 units. Thus, credit monitoring has a negative relationship with loan nonperformance. Here Y denotes loan nonperformance, X1 denotes credit monitoring, and e denotes term error. The results also show that credit monitoring is statistically significant ( $p=0.000$  and  $p\text{-value}=0.05$  thus  $p < p\text{-value}$ ) in explaining loan nonperformance among Kenyan microfinance entities.

The regression findings in Table 3 employed regression coefficient to evaluate the initial study hypothesis,  $H_0$ , which stated that credit monitoring practice had no noteworthy impact on loan nonperformance across microfinance entities in Nairobi County, Kenya. With a t-statistic value of -5.099,  $p < 0.05$ , the null hypothesis of the research was dismissed at the 0.05 significance level, and the investigation came to the conclusion that there is a positive significant regression between credit monitoring practice and loan nonperformance of microfinance entities in Nairobi County, Kenya.

The finding agrees with Dimitrios et al. (2016) who conducted a study on antecedents of loan nonperformance and discovered that credit monitoring posed a substantial positive influence on loan performance. It further agrees with Solarin et al. (2016) who carried out a study on microfinance institutions that are Islamic in Malaysian sector and noted that credit monitoring was shown to be of considerable positive influence on credit nonperformance. Pasha and Khemraj (2019) established the antecedents of loan nonperformance within the finance sector in Guyanese and noted that credit monitoring minimizes nonperforming loans and therefore had a strong favorable impact on how well the loans performed. However this is in disparity with Alshatti (2015) who established the influence of NPL ratio on financial performance of microfinance entities indicating credit monitoring to be of negative insignificant influence on loan performance.

## V. CONCLUSIONS & RECOMMENDATIONS

### 5.1 Conclusion

This research demonstrated that there exists a significantly strong positive effect of credit monitoring practice on loan nonperformance among Microfinance institutions in Nairobi County, Kenya. This shows that credit monitoring practices are of high importance hence need to practice them.

### 5.2 recommendations

The research proposes that Microfinance entities need to strengthen credit monitoring practices to minimize debt writing off and loan nonperformance. By ensuring strong credit monitoring practices the microfinance institutions will have a positive result of increased net income.

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