Firm Characteristics and Non-Performing Loans of Microfinance Banks in Kenya

Leonard Mukuru[1], Anthony Thuo[2]
[12]Department of Accounting and Finance, Kenyatta University

Corresponding Email: mukuruleon@gmail.com

Abstract

Microfinance banks in Kenya have continued to experience challenges of loan defaults which negatively impact their asset quality and performance. As a result of loan default, many of these institutions have suffered significant losses. The goal of this study was to see how firm factors affect non-performing loans at Kenyan microfinance institutions. The specific objectives were to examine the impact of leverage, business size, liquidity, and capital sufficiency on non-performing loans. Institutional theory, credit crunch theory, and liquidity preference theory served as the research's guide. The research design was descriptive. The analysis was premised on descriptive and inferential analyses. The findings showed that leverage significantly and favorably affected non-performing loans. Non-performing loans were negatively and significantly impacted by firm size. Microfinance banks' non-performing loans were not significantly affected by liquidity or capital adequacy. The study's conclusions suggest that lowering the debt ratio of microfinance banks will undoubtedly lead to a reduction in non-performing loans. By expanding the asset base, there is a greater chance that the non-performing loans of the microfinance banks will be reduced. Increasing liquidity and capital adequacy would not have a substantial impact on the non-performing loans of microfinance banks. The management of the microfinance banks should review the debt policies with aim of reducing over-reliance on debts, should strengthen the equity policy that will lead to low leverage, should develop strategic plans aimed at strengthening and growing the asset base. The management should particularly channel most of the payoffs from investment in asset acquisition. Policymakers in the financial sector especially CBK should streamline policy implementation toward loan defaulters. Academicians and researchers should review the empirical findings of this study in building their research work on related topics.

Keywords: *Leverage, capital adequacy, liquidity, firm size, non-performing loans, microfinance banks*

1.0 Introduction

Microfinance banks have done a good job of addressing the lack of access to financial services, which is one of the main barriers to private sector development in Kenya, along with other developing countries (Joseph & Kibera, 2019). Their primary function is to offer business loans on a large and small scale and ensure their sustainability (Kiarie, 2017). By providing microcredit and reimbursing funds for start-ups and expanding enterprises, microfinance banks work to eliminate poverty among the poor (Muturi, 2016). Financial institutions are essential

because of the roles they play in the allocation of economic wealth in countries. This encourages further spending and stimulates economic growth. Bank loans are used to carry out the intermediation role of connecting surplus spending entities with deficit spending operatives. Hence, the amount of NPL affects the mediation positions of commercial banks (Ngungu & Abdul, 2020).

Nonetheless, reports suggest that the microfinance sector has faced several difficulties, such as inadequate funding and a rise in loan defaults. To prevent serious crimes, managing information asymmetry to spot those who may violate the law early on is crucial (Muturi, 2016). Empirical evidence points out that there is a link between NPLs and firm characteristics. Some firm features have been shown to have a significant, insignificant, positive while others indicate a negative relationship. According to Awuor (2015), bank size, asset quality, and bank size of non-performing loans, all have a negative association.

Ngungu and Abdul (2020) show that liquidity and interest rates do not affect commercial bank NPLs. Banks' non-performing loans in Kenya are determined by their capitalization and size. According to Atem (2017), interest rates have a substantial impact on NPL at KCB Bank, although loan size, bank size, gender, and age have little impact. Olarewaju (2020) shows that company characteristics (including loan interest rates, capital adequacy, loan growth, cost-benefit ratios, and real interest rates) are significant factors that influence NPLs in the middle to the lower banking sector. It is critical to look into how non-performing loans in Kenyan microfinance banks relate to company characteristics.

Globally, banking, as well as microfinance institutions, have concentrated on invigorating the benefit of capital and liquidity standards of the banking institutions for the past decade. According to the World Bank, Taiwanese banks had a non-performing loan rate of 7.7% by the end of 2001, while local financial institutions had a rate of 16.37 percent. Non-performing loans made up 16.81 percent of the entire loan portfolio in the Philippines as of July 15, 2001, compared to 16.76 percent the previous month. However, the ratio has been steadily managed ever since and it has shown a positive decline from the year 2009 to 2019 (3.489% to 1.979%). The same has been the case in the USA with a positive decline from the year 2009 to 2019 (4.96% to 0.855%). In Italy, the bank's nonperforming loans to total gross loans have been rising since 2007 from 5.778% to 18.064% in 2015 (The World Bank Group, 2021).

In India, the main cause of non-performing loans in the microfinance industry is governance failure (Fianto, Maulida, & Laila, 2019). Microfinance institutions sometimes fail to manage certain factors under their control. The outside world is not directly under the control of microfinance institutions. As a result, it is less likely that these outside variables may cause an increase in NPLs. Effective and systematic management of NPLs should place more emphasis on internal factors because microfinance organizations have control over these problems.

Due to their crucial role in lending, non-performing loans have been identified in Ghana as a significant credit risk for microfinance banks (Afolabi, Obamuyi & Egbetunde, 2020). For example, the Central Bank of Nigeria (CBN) found that credit risk limits lending to individuals and companies in the country (CBN, 2017). In particular, Apex Bank reports that many IFACs have large amounts of bad loans, which in turn increases their loan loss provisions (CBN, 2018). NPLs in South Africa increased from 2.8442% in 2017 to 3.882% in 2019 as a proportion of all gross loans (The World Bank Group, 2021).

The risk of default is increasing, as seen by the volume of non-performing loans in Malawi's microfinance sector (Phiri, 2020). Non-performing loans, which describe the asset quality of a microfinance institution, are a performance measure and therefore affect the MFI's overall

financial stability. Bad loans freeze funds in unproductive industries, hampering economic growth and lowering economic efficiency. The causes of loan defaults in Rwandan microfinance organizations were examined by Twesige et al. (2021). The author finds that credit delays, credit defaults, credit variances, interest rates, mismanagement, and business environment have a significant impact on defaults.

In Kenya, non-performing loans have been fluctuating with a worrying trend in the past decade. For instance, from 4.421% in 2011 to 11.621% in 2018, the percentage of bank NPLs to total gross loans increased (The World Bank Group, 2021). This is largely due to poor risk assessment and management, soft/weak credit conditions, poor credit monitoring, and payment mechanisms For instance, from 4.421% in 2011 to 11.621% in 2018, the percentage of bank NPLs to total gross loans increased (The World Bank Group, 2021). difficult economic conditions such as high-interest rates, business organization, and guarantees for customers to get credit, recurring borrowing by customers, overfunding by customers with little or no capacity for loan repayments, and making notional loans by loan officers (Atem, 2017). The trends in the performance of NPLs show that there is a dire need to focus on how to optimize the performance of bank loans and improve the asset quality to facilitate the growth of the microfinance industry.

According to Njue (2020), Kenyan MFIs have experienced a rapid increase in non-performing loan rates, which has led to liquidity problems. Liquidity issues have resulted in performance problems for MFIs in Kenya such as Deposits being rejected. A risky asset with bad credit is one that doesn't provide income and hasn't been paid back in at least 90 days. Several studies have found that non-performing loans cause financial organizations to go into liquidation, which in turn affects all assets (Ntoiti & Jagongo, 2021). In essence, the financial crisis occurred because bad loans were left unresolved. Financial institutions must establish methods to monitor borrower behavior and identify and understand the reasons for non-performing loans to control this problem (Gautam, 2018).

1.1 Statement of the Problem

The Kenyan microfinance banks face numerous challenges of loan defaults which negatively impact their asset quality and thus poor performance. As a result of loan default, many of these institutions have suffered significant losses. According to CBK data, nonperforming loans (NPLs) increased by 27.7% (KSh 63.8 billion) in June 2018 compared to June 2017, owing to delayed payments by government agencies and the private sector, as well as a poor uptake of produced dwellings in the real estate industry (CBK, 2018). Banks now have a higher percentage of gross loans that are non-performing than they had in 2011, which grew to 11.621 percent in 2018 (World Bank Group, 2021). According to the survey, some of these microfinance institutions, including Rafiki DTM (30.8%), Milano Financial Service Ltd (17.2%), SMEP (17.2%), and Jamii Bora (15.8%), have had high PARs of 30 over the past three years (Ngungu & Abdul, 2020). This trend results in the devaluation of the banking institutions' asset quality and reduces their effectiveness and sustainable capacity.

Previous studies have been done on non-performing loans. Atem (2017) investigates the factors that influence NPL at Kenya's KCB Bank and discovers that interest rates have a substantial impact on NPL, whereas loan size, bank size, gender, and age have little impact. This study's empirical gap is the lack of a relevant relationship between loan size, bank size, and non-performing loans. Ngungu and Abdul (2020) investigated the features of Kenyan commercial banks as well as non-performing loans, discovering that capital sufficiency has a substantial

impact on non-performing loans. Because it focused on commercial banks rather than microfinance banks, the study exposes a contextual gap.

Al Masud (2019) investigated the non-performing loans, company characteristics, and corporate governance of Bangladesh's state-owned commercial banks. It found that cyclicality of credit and board size was significantly associated with NPL. The results from Bangladeshi commercial banks, however, do not apply to Kenyan microfinance institutions. The identified gaps, therefore, informed the current study, and thus, it was worthwhile to investigate the influence of firm attributes on NPLs of microfinance banking firms in Kenya.

1.2 Specific Objectives

i. To determine the effect of leverage on non-performing loans of microfinance banks in Kenya.

ii. To establish the effect of firm size on non-performing loans of microfinance banks in Kenya.

iii. To evaluate the effect of liquidity on non-performing loans of microfinance banks in Kenya.

iv. To determine the effect of capital adequacy on non-performing loans of microfinance banks in Kenya.

1.3 Research Hypotheses

i. H_{01}: Leverage has no substantial impact on non-performing loans of microfinance banks in Kenya

ii. H_{02}: Firm size has no substantial impact on non-performing loans of microfinance banks in Kenya

iii. H_{03}: Liquidity has no substantial impact on non-performing loans of microfinance banks in Kenya

iv. H_{04}: Capital adequacy has no substantial impact on NPLs of microfinance banks in Kenya

2.0 Literature Review

2.1 Theoretical Review

2.1.1 Institutional Theory

Meyer and Rowan (1977) created the institutional hypothesis, which is based on the notion that businesses embrace ethical business practices and develop more consistent conduct over time. This allows the firm to adapt to environmental changes, which is crucial for achieving profitability, which is the overall corporate goal. Banks fight with one another for clients, market share, and profitability in a competitive economy. Banks are under pressure to follow regulations to engage in fair competition and carry out legal business. This might save the bank a ton of money that would otherwise be spent on penalties and fines for engaging in unethical business practices like unfair competition. The bank could incur significant expenses as a result, which would hurt its profits. Companies establish credibility by adhering to the standards and conduct that govern how they conduct business in a certain sector. By doing this, banks may operate their operations with little disturbance from breaking the rules.

Profitable businesses follow the established norms and regulations, according to Mezias (1990), which fosters an environment where the company can develop and prosper. For businesses to operate effectively, they must comply with regulatory standards that take into

account environmental issues like competition and technological change (DiMaggio & Powell, 1991). Haveman (1999) asserts that huge companies are lucrative if they can adjust to environmental changes and successfully compete in the market. Coercive pressures are formal or informal constraints placed on businesses by other organizations that depend on them (DiMaggio & Powell 1991). In a market where there is competition, banks compete for assets, knowledgeable personnel, and the use of information technology to innovate and create goods and services that are special to the clients. As a result, the bank can provide value-added services in comparison to its rivals. Companies have been encouraged by this institutional strategy to reevaluate their methods and long-term plans to attain profitability (Burns & Wholey, 1999).

The institutional theory, which is supported by research, contends that the size of a corporation has an impact on its profitability. The theory takes into account developments in the financial market, antitrust laws, the legal system, market size, and patent protection. Because they have a solid reputation as providers, a better grasp of the market structure, and more robust patent protection, large, stable businesses are regarded to have an easier time satisfying institutional needs and regulatory requirements. This makes it simpler for businesses to adhere to rules and concentrate on their operations with little disturbance. The company size variable in this study is consequently supported by the hypothesis.

2.1.2 The Credit Crunch Theory

Hyman Philip Minsky proposed the credit crunch theory in 1992. According to the hypothesis, supply, and demand are the primary factors influencing the contraction of bank credit. When economic development slows, demand for credit is expected to be further disrupted as borrowers become more cautious about borrowing. Furthermore, banks contributed to the drop in lending by allowing borrowers' credit quality to deteriorate amid poor economic growth, resulting in collateral depreciation and increased bad debts. As a result, banks' willingness to lend has decreased (Omotende, 2013). The tightening of non-permanent loan conditions, such as exacerbates this. Higher credit margins, collateral requirements, and stricter lending rules are all necessary. Because both the bank and the borrower were in serious financial trouble, this sharp fall in bank lending resulted in a slower monetary expansion.

Banking authorities implemented higher statutory capital ratios during the credit crisis, which caused banks in some countries to raise relative borrowing costs as a result of cyclical credit losses, declining borrower quality, and the implementation of these new requirements. The demand for loans decreased as a result. Bank reluctance to lend decreases as the economy expands and banks implement stricter lending guidelines (Saunders, 2012). It demonstrates how the worth of the collateral affects the condition, behavior, and lending decisions of banks, which in turn affects the bank's financial performance. This idea is pertinent to this study. Therefore, the theory is the core of the leverage variable in this study.

2.1.3 Liquidity Preference Theory

Following the Great Depression, which witnessed sustained unemployment and left the quantitative theory of money with no answers to society's economic difficulties, John Maynard Keynes created it in the early 1930s. Uchendu (2011) argues that the theory put forth in his 1936 book General Theory of Employment, Interest, and Money contradicts the idea that firms and families want to maintain a constant income. Several complex elements influence money. Interest rates, liquidity preferences, income variations, expected cost levels, cash substitute availability, and the number of non-bank financial institutions, are all factors that influence income variability (Ankintoye, 2000).

Keynes (1936) distinguished three motives for holding money: the transactional motive, which is intended to fill the gap between planned income and expenditure; the precautionary motive provides a purchasing power tank to fund unexpected expenses; and speculative motive, namely to satisfy the desire to retain wealth in its most liquid form when interest rates on alternative assets announce that they will rise, namely capital losses. The need for cash balances and to cover existing assets and business transactions drives the demand for money in transactions (Okpara 2010).

The principle applies to this research as it explains the concept of retaining or holding money in liquid form. According to the theory, firms hold money for three reasons, that is, transaction, precautionary and speculative motives. The theory emphasizes the importance of holding money or rather the importance of having liquidity. Therefore, the study underpins the liquidity variable in this study.

2.2 Empirical Review

2.2.1 Leverage and Non-Performing Loans

Valipour et al. (2015) used a panel data approach to investigate the influence of macroeconomic variables on NPLs in a few Tehran Stock Exchange banks from 2008 to 2013. The findings suggest that financial leverage has a favorable impact on problematic loans while economic growth has a negative impact. However, leverage was not included in the analysis as a significant factor determining nonperforming loans.

Li (2020) investigates the impact of regulation on commercial bank leverage ratios, lending expansion, and credit risk. Data was gathered from 16 China-registered commercial banks between 2013 and 2018. The empirical findings suggest limiting commercial bank credit expansion while increasing commercial bank credit risk. However, the study only operationalized the leverage ratio, without illustrating how to leverage ratio affects non-performing loans.

2.2.2 Firm Size and Non-Performing Loans

Muriithi and Waweru (2017) investigate commercial banks' financial performance depending on their size. The study examined 42 commercial banks in Kenya using a causal research methodology. Secondary data was gathered from individual commercial bank financial files, as well as pulp and paper factory records. The data was analyzed with Stata 14.0, which produced descriptive findings and panel models. The results showed that a bank's size has a positive and significant impact on its financial performance. The focus of this study is on the financial performance of Kenyan commercial banks as opposed to non-perfume leasing companies, which operate in a different operational and regulatory framework.

In Kenya, Mwangi (2016) looked into the impact of firm size on microfinance bank profitability. The potential correlations between variables were discovered using a descriptive research design. Thirteen microfinance banks with operating licenses in Kenya made up the study's sample. Nine Microfinance Banks that were open and operating between 2011 and 2015 were included in the study's sample size. According to the study, there is a strong correlation between bank size, liquidity, capital adequacy, and the effectiveness of microfinance banks. However, while the previous study focused on the impact of firm size on microfinance bank profitability, this one focused on non-performing loans.

2.2.3 Liquidity and Non-Performing Loans

The impact of liquidity restrictions on the risk appetite of US banks is examined by Bosshardt and Kakhbod (2020). Using the percentage of non-performing loans to total loans and the credit

default swap spread, the effects of the two liquidity requirements on bank risk appetite were examined (CDS). The study's use of regression fraction methods revealed no proof that reserve restrictions had a substantial effect on the ratio of non-performing loans. By adopting the margin specification, there is no evidence that the liquidity coverage ratio significantly affects the non-performing loan ratio or CDS spread. However, the research focused liquidity regulation on US Bank Risk-Taking whose operational business environment and regulations are different from non-performing loan firms in the Kenyan economy.

Amir (2019) examines the impact of bank excess liquidity on non-performing loans in a study of the Bangladesh economy. This study performs a simple linear regression analysis where the beta ratio of excess liquidity of banks is -0.435, which clearly shows the inverse movement of the two variables that support the real banking system. By lowering the amount of non-performing loans and raising each bank's liquidity, the equation model maintains the economic relationship between excessive bank liquidity and non-performing loans. However, the study focused on non-performing loan firms in the Bangladesh economy whose operational business environment and regulations may be differing from non-performing loan firms in the Kenyan economy hence the need to undertake this study.

2.2.4 Capital Adequacy and Non-Performing Loans

In Indonesian commercial banks from 2012 to 2016, Julianti et al. (2018) looked at the correlations between capital adequacy, bank size, and non-performing loans. Bank Indonesia's financial filings provided secondary data for this investigation. The goal of this investigation is to evaluate a theory. The investigation's final sample included 81 samples gathered utilizing a targeted sampling method. According to the research, the equity ratio affects non-performing loans. These findings suggest that the equity ratio affects non-performing loans favorably, at least in part. Nonetheless, the research focused on capital adequacy in Indonesia whose operational business environment and regulations may be different from capital adequacy in Kenya hence the need to undertake this research.

Ngumo et al. (2020) looked at how much capital microfinance banks in Kenya needed to perform financially. The research uses a descriptive research design, with thirteen microfinance banks in Kenya as the target group. Because secondary data were only available for five years, they were only gathered for eight microfinance banks. The information shows a strong and positive relationship between capital sufficiency and ROA. The study did not, however, demonstrate how much capital adequacy affected non-performing loans.

3.0 Methodology

The research design was descriptive. The study's intended audience consisted of 13 Kenyan microfinance institutions. Secondary data was gathered for six years, from 2016 to 2021. The information was gathered from the respective microfinance institutions' annual records as well as the Kenyan Central Bank. The analysis was premised on descriptive and inferential analyses. Descriptive analysis was undertaken first to give general research variables characteristics. These range from minimum, and maximum values, to standard deviation and mean. Correlation analysis was conducted to ascertain the direction as well as the extent of association among the research variables. Panel regression analysis was used to study the impact of company characteristics on non-performing loans in Kenyan microfinance banks. The researcher acknowledged all sources from where information used was borrowed. The researcher sought approval letters from relevant authorities before undertaking data collection.

4.0 Findings and Discussion

4.1 Descriptive Statistics

The descriptive summary findings for the study variables are presented in this section. The study specifically lists each variable's mean, standard deviation, minimum and maximum values. The results are displayed in Table 1.

Table 1: Descriptive Analysis

Construct	Obs	Mean	Std. Dev.	Min	Max
Non-performing loans	78	0.662	1.896	0	15
Leverage	77	2.837	2.838	-2.92308	17.25
Firm size	78	5588.108	10035.630	9	32153
Liquidity	78	0.442	0.817	0.02	7.2
Capital adequacy	78	9.369	14.989	-7	80.09259

Source: Research data (2023)

Table 1 shows that the average annual non-performing loan ratio of the microfinance banks during the study period was 0.662. The results indicated a positive value of non-performing loans by microfinance banks. The minimum and maximum values of the non-performing loan ratio were 0 and 15 respectively.

The results indicated that the average leverage (debt ratio) of the microfinance banks during the study period was 2.837. The results imply a high debt-to-equity ratio. This indicated that microfinance banks were highly leveraged. The debt ratio ranged from -2.92308 to 17.25, with those numbers being the minimum and maximum.

The findings indicated that the average firm size (total assets) of the microfinance banks during the study period was Ksh. 5,588.108 million. The values of firm size ranged from Ksh. 9 to Ksh. 32,153 million, respectively.

The findings indicated that the average liquidity (cash ratio) of the microfinance banks during the study period was 0.442. This indicated that the microfinance banks had strong liquidity. Liquidity had values as low as 0.02 and as high as 7.2, respectively.

The findings showed that the average capital adequacy (total equity/earning assets) of the microfinance banks during the study period was 9.369. This indicated that the microfinance banks had strong capital adequacy. The capital adequacy values ranged from -7 to 80.09259, respectively.

4.2 Correlation Analysis

This section provides results on the correlation between firm attributes and NPLs of microfinance banks. Results are illustrated in Table 2.

Table 2: Correlation between Firm characteristics and non-performing loans

	Non-performing loans	Leverage	Firm size	Liquidity	Capital adequacy
Non-performing loans	1				
Leverage	0.665*	1			
Firm size	-0.473*	-0.032	1		
Liquidity	-0.138	0.099	0.464*	1	
Capital adequacy	-0.250*	0.158	0.769*	0.769*	1

*Correlation is significant at the 0.05 level (2-tailed)

Source: Research data (2023)

Table 2 indicates that there was a positive and substantial association between leverage and NPLs (r=0.665*). The findings imply that a rise in microfinance banks' leverage (debt ratio) is associated with a rise in their non-performing loans. The findings agree with those of Valipour, Pasha, and Bastanzad (2015) who established that leverage has a favorable impact on problematic loans.

The findings showed a weak and negative correlation (r= -0.473*) between business size and NPLs. The conclusion suggests that a decline in non-performing loans at microfinance banks coincides with an increase in firm size (total assets). The findings corroborate those of Angahar and Mejabi (2014), who discovered that firm size significantly worsens the risk of NPLs.

The findings showed that there was a weak but negative link (r= -0.138) between liquidity and NPLs. The conclusion suggests that a decrease in microfinance banks' non-performing loans coincides with an increase in liquidity (cash ratio). The decrease in NPLs, however, is minuscule. The results mirror those of Bosshardt and Kakhbod (2020) who established that liquidity coverage ratio had no substantial impact on the non-performing loan ratio.

The results showed that capital adequacy and non-performing loans had a substantial negative connection (r=-0.250*). The conclusion suggests that a decrease in non-performing loans at microfinance banks coincides with an increase in capital adequacy (total equity/earning assets). The outcomes are in line with Julianti, Aliamin, and Ibrahim's (2018) findings, which indicated that capital adequacy had an impact on non-performing loans.

4.3 Hausman Test

Hausman's test was used to determine whether a fixed or random effect model was appropriate, and the results are shown in Table 3.

Table 3: Hausman Test

	(b) fixed	(B) Random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
Leverage	0.4063208	0.3175189	0.088802	0.023802
Firm size	-1.465777	-0.5701613	-0.89562	0.993324
Liquidity	-0.0672178	0.0184696	-0.08569	.
Capital adequacy	0.0241171	0.0005657	0.023551	0.005179
chi2(4)	77.98			
Prob>chi2	0.097			

Source: Research data (2023)

Table 3 indicated a p-value of $0.097 > 0.05$, and this implied that the random effects model was appropriate for this study.

4.4 Random-effects Regression Model

This section proposes a random-effects regression model that examines how firm characteristics affect microfinance banks' nonperforming loans (NPLs). The results are depicted in Table 4.

Table 4: Random-effects model

Regression results for Random-effects						
Number of obs	= 77					
R-sq:	= 0.6205					
Wald chi2(4)	= 125.9					
Prob > chi2	=0.000					

Non-performing loans	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Leverage	0.3175189	0.030743	10.33	0.000	0.257264	0.377774
Firm size	-0.5701613	0.2161861	-2.64	0.008	-0.99388	-0.14644
Liquidity	0.0184696	0.1079318	0.17	0.864	-0.19307	0.230012
Capital adequacy	0.0005657	0.0119005	0.05	0.962	-0.02276	0.02389
_cons	1.311752	0.6366472	2.06	0.039	0.063947	2.559558

Source: Research data (2023)

Model

Non-Performing Loans= 1.311752 + 0.3175189Leverage - 0.5701613 Firm size+0.0184696 Liquidity+0.0005657 Capital adequacy

According to Table 4's R squared value of 0.6205, the business characteristics together accounted for 62.1% of variations in non-performing loans held by microfinance banks. Other elements outside the scope of this study's model are responsible for the remaining 37.9%. Furthermore, the model successfully predicted the relationship between the independent and dependent variables, as shown by the F value of 125.9 and a p-value of 0.000<0.05.

The findings indicated that leverage had a favorable and significant impact on microfinance banks' non-performing loans (β =0.3175189, p value=0.000<0.05). The findings suggested that a one unit increase in leverage would result in a 0.3175189 unit rise in non-performing loans. The H01, which claimed that leverage had no discernible effect on the NPLs of Kenyan microfinance banks, was found to be false. The results agree with those of Valipour, Pasha, and Bastanzad (2015) who established that financial leverage has a positive impact on non-performing loans. Similarly, the results concur with Ghosh (2015) argument that debt reduction is a key factor in reducing NPLs.

The findings demonstrated that firm size had a negative and substantial influence on non-performing loans (β = -0.5701613, p value=0.008<0.05). The findings suggested that a one-unit increase in business size would result in a 0.5701613-unit decrease in NPLs. The H02 that firm size has no appreciable impact on non-performing loans of microfinance banks in Kenya was disproved in light of the data. The findings corroborate those of Angahar and Mejabi (2014), who discovered that firm size significantly affected the amount of non-performing loans.

The findings demonstrated that liquidity had no discernible impact on microfinance banks' non-performing loans (p value=0.864>0.05). The findings suggested that the non-performing loans were not significantly influenced by the microfinance institutions' liquidity. The H03, which states that liquidity has no discernible impact on the NPLs of Kenyan microfinance banks, was accepted in light of the data. The outcome agrees with Bosshardt and Kakhbod (2020) observation that liquidity coverage ratio had no substantial impact on the NPL ratio.

According to the findings (p value=0.962>0.05), capital sufficiency had no discernible impact on the non-performing loans of microfinance banks. According to the findings, the capital sufficiency of microfinance banks did not substantially determine NPLs. Based on the results, it was decided to adopt the H04, capital sufficiency has no discernible influence on the NPLs of Kenyan microfinance banks. These findings support those of Malimi (2017), who discovered that capital adequacy had little bearing on non-performing loans. The results, however, contradict a study by Ngungu and Abdul (2020), which found that capital sufficiency significantly affects non-performing loans.

5.0 Conclusion

The research concludes that leverage has a favorable and substantial effect on problem loans from Kenyan microfinance banks. The bottom line is that lowering the debt ratio should reduce bad loans from microfinance banks.

This study also concludes that company size has a negative and significant effect on non-performing loans from microfinance banks in Kenya. On balance, an increase in the asset base will reduce the NPLs of microfinance banks.

The study further concluded that liquidity and capital adequacy did not have a significant impact on the bad loans of microfinance banks in Kenya. It was concluded that the increase in liquidity and capital adequacy would have a negligible effect on the non-performing loans of banks.

6.0 Recommendations

Microfinance bank management should review debt policies to reduce excessive dependence on debt. Microfinance bank management should strengthen equity policies, which will result in low leverage.

The management of microfinance banks should develop strategic plans aimed at strengthening and growing the asset base. The management should particularly channel most of the payoffs from investment in asset acquisition.

Policymakers in the financial sector especially CBK should streamline policy implementation toward loan defaulters. Academicians and researchers should review the empirical findings of this study in building their research work on related topics.

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