
FINANCIAL LEVERAGE, INCOME DIVERSIFICATION AND FINANCIAL SUSTAINABILITY OF MFIS IN KENYA

Livingstone Talel, Stella Korir and Robert Otuya

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Abstract

Background: Microfinance institutions are essential for promoting economic development and ensuring financial inclusion. Financial sustainability is crucial for the expansion of microfinance institutions and their ability to serve underprivileged borrowers.

Research Objective: The primary aim of this study was to determine the impact of financial leverage on the financial stability of MFIs, and to examine how revenue diversification influences this relationship.

Methodology: The study was conducted based on the pecking order theory and the contemporary portfolio theory. Data was collected from 32 Microfinance Institutions (MFIs) over 2010-2019.

Results and Findings: The study revealed that financial leverage has a negative and significant effect on the financial sustainability of MFIs. Conversely, income diversification had a positive effect on the financial sustainability of the MFI. Furthermore, the between the use of financial leverage and the diversification of income has an adverse effect on the financial MFIs.

Conclusions and Recommendations: The study advised that managers of Microfinance Institutions (MFIs) should have a clear understanding of the negative effect of debt financing on the MFIs' endeavours to achieve sustainability. Additionally, it is crucial for managers to comprehend the detrimental impact that arises from the interplay between leverage and non-interest earning activities. The results have significant implications for management of MFIs and policymakers, considering their crucial role in service delivery and the constraints that prohibit the sector from achieving financial sustainability in the economy.

Keywords: *Microfinance, Financial Sustainability, Leverage, Income Diversification, Kenya.*

1. Introduction

Microcredit plays a vital role in combating poverty. Due of its socioeconomic importance, policymakers and academic scholars have closely scrutinised their financial viability. Microfinance institutions (MFIs) have historically depended on funds provided by donors. However, there is now evidence indicating a significant decrease in support from both donors and governments. This decline poses a challenge to the financial viability of MFIs and their capacity to fulfil their social objectives. Multiple international research indicate that a significant proportion of Microfinance Institutions (MFIs) lack financial sustainability (Abdulhakim, 2020; Naz et al., 2019; Bayai & Ikhide, 2018). According to data from the CBK, it was found that in 2018, 86% of the deposit taking microfinance institutions in Kenya, namely twelve out of fourteen, had financial losses. Subsequently, an additional 11 DTMs disclosed financial losses in the year 2019. In 2020, the bad performance persisted, as 10 out of fourteen (71%) recorded losses. The losses incurred by DTM amounted to Ksh 1.19 billion in 2018, but decreased to Ksh 309 million in 2019, as reported in the CBK Bank Supervision Annual Reports for 2018, 2019, and 2020.

The financial sustainability of Microfinance Institutions (MFIs) is a crucial factor for their long-term survival and is a fundamental prerequisite for any MFI (Githaiga et al., 2023). The importance of financial sustainability for MFIs cannot be overstated. MFIs that are financially unsustainable may provide assistance to the poor at present, but there is a risk that they may not be able to continue doing so in the future due to the likelihood of their closure. Bogan et al., (2007) have emphasised the significance of financial structure in ensuring the financial viability of MFIs. The claim is substantiated by the significant decrease in subsidies and financial support from donors, as well as the transition of microfinance institutions towards commercialization (Kipesha & Zhang, 2013). Recent research has shown that the inconsistency of donor funding has a detrimental effect on the long-term sustainability of microfinance institutions. As a result, microfinance institutions (MFIs) are increasingly dependent on commercial loans, equity, and deposits as sources of funding (Githaiga et al., 2023; Mia & Lee, 2017). The existing literature does not provide a clear understanding of the precise relationship between financial structure and financial sustainability, despite its importance (Bogan, 2012; Bayai & Ikhide, 2018; Bibi, Raza & Javid, 2022; Mia & Lee, 2017). These contradictory results highlight the importance of investigating supplementary factors that could impact the link between the financial leverage and financial sustainability of MFIs.

Previous research has established a significant relationship between a company's diversification strategy and its investment and financing choices (La Rocca et al., 2009; Monteforte & Staglian, 2015). The financial structure of an entity plays a crucial role in assessing its financial robustness and can be altered by decisions made about corporate strategy. Consequently, both financial and strategic decisions are made simultaneously (Barton & Gordon, 1987; Berger & DI Patti, 2006). Several viewpoints have been employed to elucidate the impact of diversity on financial structure: the coinsurance effect (Lewellen, 1971), the transaction cost (Kochhar & Hitt, 1998), and the agency cost (Kochhar, 1996; Jensen, 1986). According to Kochhar and Hitt (1998), corporate strategy plays a crucial role in understanding a company's decision-making process about its financial structure. Some claim that diversification worsens debt-related agency conflicts, such as asset substitution (Jensen & Meckling, 1976). Therefore, if managers are motivated to satisfy shareholders' interests, they will prioritise diversification in order to achieve the pre-established objectives (Jensen, 1986). Geographical diversification has been found to be associated with enterprises' financing decisions, as indicated by several studies (Singh & Nejadmalayeri, 2004;

Kwok & Reeb, 2000). Previous studies within the banking industry have shown that there is a correlation between diversification and leverage. This suggests that financial organisations that are more diverse tend to rely less on debt capital (Jouida & Hellara 2018). According to Winton (1999), increased diversification enables banks to have smaller equity capital and therefore larger debt. Sorokina, Thornton Jr, and Patel (2017) observe that there is a negative correlation between bank leverage and loan portfolio diversification. Recent research has indicated that microfinance institutions (MFIs) and banks are progressively transitioning towards non-lending endeavours in response to the decrease in interest income (Githaiga, 2022). Hence, this study aims to investigate whether revenue diversification acts as a moderating factor in the association between financial leverage and financial sustainability of Microfinance organisations in Kenya.

2. Theoretical review

The pecking order theory aims to quantify the costs associated with unequal distribution of information (Frank & Goyal, 2008). It acknowledges that internal resources and external resources are not interchangeable in a world where there is unequal access to information between investors and management. The former party requests a premium to be adequately remunerated for the risk that the information provided by the later party may not be entirely truthful. The premium demanded from stock investors is more than that demanded from debt investors. It is important to note that managers also tend to issue loans when they believe it is overpriced. The pecking order theory posits that firms should prioritise their sources of finance, starting with internal financing and moving towards equity, in accordance with the principle of little effort or resistance. Equity should be considered as a last choice for financing (Olaoye & Adesina, 2022). Following the use of internal finance, it is advisable for the company to issue secure securities. While investors have concerns about the mispricing of both debt and equity, the level of apprehension is significantly higher for stock. Corporate debt carries lower risk than stock due to the set return investors receive, provided that financial hardship is avoided. Therefore, according to the pecking order theory, if there is a need for external funding, it is advisable to prioritise issuing debt over equity. The company should contemplate issuing stocks solely when it has achieved its maximum borrowing capacity. Given the various forms of debt, including convertibles and straight debt, and considering that convertibles carry more risk compared to straight debt, the pecking order theory suggests that it is advisable to issue straight debt prior to issuing convertibles. The pecking order theory emphasises the importance of a firm's capital structure adhering to a specific pattern due to challenges in securing funding at a fair expense. In contrast the MM hypothesis, the firm's worth may decline if it does not prioritise the financing of its projects by first using internal funds, then debt, and finally equity (Farooq et al., 2023).

3. Review of literature

3.1. Debt and Financial Sustainability of MFIs

Research indicates that debt can have both advantageous and detrimental effects on the financial sustainability of MFIs. Bogan (2012) contends that commercial debt is a favourable means of obtaining inexpensive financing for MFIs, as it enhances efficiency. However, if this loan is concessional, it may have a negative impact on domestic markets. Research examining the influence of debt on the financial sustainability of microfinance institutions (MFIs) has produced

varied results. In a study conducted by Chikalipah (2019), the researcher examined the influence of funding sources on the financial performance of microfinance institutions (MFIs) in the Sub-Saharan region. A sample of 471 microfinance organisations selected from 36 Sub-Saharan African states from 1995 to 2012 was analysed using the GMM estimator. The study revealed that debt and microsavings exerted a negative effect on the financial performance of microfinance institutions in Sub-Saharan Africa. Chauhan (2021) analysed data from Indian NGO-MFIs that report to the Microfinance Information Exchange (MIX) market for the years 2009-2010 and 2014-2015. Using the Probit regression model, the study concluded that there was no statistically significant relationship between debt financing and financial efficiency. In a study conducted by Kinde (2012), the author investigated the determinants of financial sustainability of MFIs in Ethiopia. The study utilised a sample of 16 MFIs and covered the period from 2002 to 2010. The data was analysed using fixed effect and random effect regression models. The analysis revealed a no significant link between debt and financial sustainability of MFIs. In their study, Rutanga et al. (2021) investigated the link between capital structure and the performance and financial sustainability of microfinance institutions (MFI) in Rwanda. The authors utilised fixed effects OLS regression models to analyse panel data from 2014 to 2018. The study findings revealed that the use of loan financing has an adverse impact on both financial self-sufficiency and performance. Sekabira's (2013) assessed the effect of capital structure on the performance of microfinance institutions in Uganda. A total of 14 Microfinance Institutions (MFIs) were included in the analysis, utilising both fixed effect and probit regression models. The author reported a negative correlation between debt and grants and the sustainability of operations and finances.

Parvin et al. (2020) discovered that in their research on Bangladesh Microfinance institutions, the debt to loan ratio (DTL) had a significant and positive influence on the return on assets (ROA) when using the random effect model. Nevertheless, DTL had a negative impact on net income to expenditure (NIER). The research employed a sample of 187 Microfinance Institutions (MFIs) that were active in Bangladesh from 2005 to 2014. In a study conducted by Bich (2016), the author examined how the capital structure of microfinance institutions (MFIs) in developing countries affects their performance. The study utilised a sample of 434 MFIs from the years 2010 to 2014, and the data was analysed using the Ordinary Least Squares (OLS) regression model. The study findings indicate that the capital structure has a significantly negative impact on the financial sustainability of microfinance institutions (MFIs) in developing nations.

In a study conducted by Tehulu (2013), a total of 23 microfinance institutions (MFIs) in East Africa were analysed over the period of 2004 to 2009. The results indicated that debt had a negative and statistically significant effect on the financial sustainability of these institutions. Githaiga et al., (2023) conducted a study using a sample of 444 MFIs from a global dataset for the period of 2013-2018. They employed three panel data estimation models, namely the fixed effect, random effect, and dynamic panel system generalised method of moments. The study revealed a negative correlation between leverage and financial sustainability. Ayele (2015) examined whether MFIs can increase their depth of their outreach whilst achieving financial sustainability using an unbalanced panel dataset of 31 MFIs (2003–12) drawn from the three countries (Ethiopia, Kenya and Uganda) and both the Hausman-Taylor and Generalized Structural Equation Models. The authors reported an inverse relationship between financial leverage and financial sustainability of MFI. Employing a sample of 169 MFIs in Bangladesh from the period of 2009 to 2014, Mia and Lee (2017) and three panel data estimation techniques (the Fixed Effect (FE) and Random Effect (RE) and the two-step system generalized method of moments (SGMM), found that commercial

loans had a positive and significant effect on MFIs operational self-sufficiency. However, the author reported that use of commercial loans might lead to a mission drift. Using a sample of 15 Ethiopian MFIs operating between the years from 2011 to 2018 and fixed effect regression model, Abdulhakim (2020) found that debt capital had a positive but insignificant effect on financial sustainability of MFIs. Khachatryan *et al.*, (2017) found a negative but statistically insignificant relationship between equity capital and MFI performance in sixteen countries across Eastern Europe and Central Asia (ECA) from 2005 to 2009. Using an unbalanced panel data set of 145 observations from 29 MFIs over the period 2008-2012 in Bangladesh, Hossain and Khan (2016) assessed the determinants of MFIs financial sustainability. They found that capital assets ratio and net write-off had a significant effect on microfinance institutions financial sustainability. However, they found that MFI size, age of MFI, borrower per staff members, ratio of savings to total assets, debt equity ratio, outstanding loan to total assets and percentage of female borrowers had no significant effect on financial sustainability of MFIs in Bangladesh. Githaiga and Bitok (2023) using a global sample of 646 MFIs drawn from the World Bank Mix Market and panel data for 2010–2018, and employing the ordinary least squares (OLS) and the one-step system generalized method of moments (SGMM), found that financial leverage and the proportion of female borrower had a negative and significant effect on financial sustainability. They further found that the interaction between financial leverage and the percentage of female borrowers positively affected financial sustainability of MFIs. The study therefore proposes the following hypothesis

H1. Leverage has a negative and significant effect on financial sustainability of MFIs

3.2. Moderating effect of income diversification

Singh and Nejadmalayeri (2004) argue that traditional capital structure theories are inadequate in explaining the connection between a firm's specific characteristics, such as its business, financial situation, and lifecycle stage, and the level of financial leverage and resulting cost of capital. Barton and Gordon (1987) introduced a strategic approach to analysing capital structure decisions. They suggested that the connection between diversification strategy and financial leverage is a result of the complex character of managerial behaviour. The Lewellen (1971) coinsurance effect is a notion that can be employed to elucidate the interplay between international diversification and leverage. Lewellen (1971) proposed that default risk may be mitigated by merging enterprises with less-than-perfect correlation, resulting in a steadier cash flow and increased "debt capacity." When a firm enters foreign markets with diverse economic and financial situations, the returns from different areas may be affected by local market conditions and may not be fully correlated. Consequently, the overall instability of the company's cash flow would be less than the instability of any particular cash flow, and the danger of default would also be decreased. Therefore, in the event that a company is confronted with an elevated likelihood of failure due to a rise in financial debt, it may opt to pursue foreign diversification as a means of ensuring a more consistent cash flow and mitigating its default risk. In accordance with the agency cost theory proposed by Jensen (1986), this correlation could be reinforced if managers' personal wealth is strongly linked to the company and they aim to minimize the risk to their own financial assets.

Nevertheless, engaging in income diversification may also heighten the level of concentration of assets that are special to a particular organization, so diminishing the value that can be recovered in the case of bankruptcy and diminishing lenders' inclination to offer debt financing. Kochhar and Hitt (1998) stated that related diversification enables the sharing of operations and transfer of

talents between enterprises, leading to an increase in company value. As the transfer of core competency speeds up, the strategic assets accumulate at a faster rate. Consequently, a greater proportion of these assets becomes specific to the firm. When a company goes bankrupt, its assets that are particular to the firm typically have lower valuations that can be easily converted into cash. As a result, creditors may be hesitant to lend money to the company or the project. Hence, the process of income diversification, by facilitating the acquisition of unique strategic assets of a company through the transfer of core competencies across borders, may diminish the inclination of lenders to offer debt financing and consequently lead to decreased financial leverage. Titman and Wessels (1988) found empirical evidence supporting the idea that a company's leverage is inversely related to the uniqueness of its product and the level of specialized service it requires.

To understand the impact of the interplay between diversification and financial leverage on profitability, it is most effective to analyse the comparative expenses of debt financing and equity financing across various degrees of diversification. According to the findings, financial institutions with a higher non-interest income share take on excessive risk, implying that they can take more debt capital (Githaiga, 2022). Kochhar (1997) contended that while debt financing is less expensive than equity financing when asset specificity is low, the cost of debt financing increases at a comparatively faster rate compared to equity financing and finally exceeds the cost of equity. Internationally diversified enterprises experience higher debt costs compared to equity costs due to the increased asset specificity resulting from worldwide diversification. Consequently, diversified firms with greater financial leverage would experience increased costs of obtaining finance compared to their less leveraged peers, and their financial performance would be negatively affected. MFIs engaging in income diversification are more likely to have overinvestment issues and have fewer untapped growth prospects. Internal capital markets allow diverse organizations to utilize cash flows from high-performing divisions to support underperforming divisions, potentially leading to excessive investment (Berger & Ofek, 1995). Furthermore, diversified firms have a reduced number of untapped growth prospects compared to non-diversified companies, assuming that diversification involves taking advantage of profitable existing growth alternatives by replacing them with the assets that support them (Bernardo & Chowdhry, 2002). Thus, the following hypothesis is formulated

H2. Income diversification moderates the relationship between leverage and financial sustainability of MFIs.

4. Research Method

This section discusses the methodology and methods that the study utilized to address the research questions.

4.1. Data

The study uses a dataset of all MFIs that operated for the for the period between 2010 and 2019. The dataset sourced from the MIX market, a World Data base for all MFIs that self-report with the organization. Kenya has a total population of 53 registered MFIs, however only 32 Kenya MFIs had data for the entire period, resulting to 320 firm-year observation.

4.2. Measurement of variables

The study had three sets of variables comprising the dependent variable, the independent variable and a set of control variables as supported by previous studies. The measurement of the study variables is summarized in table I below.

Table I. Measurement of Variables

| Variable | Nature of variable | Operational Definition | Measurement | Source |
|--------------------------|--------------------|------------------------------|--|-----------------------|
| Financial sustainability | Dependent variable | Operational self-sufficiency | The ratio of total revenue to operating expenses (Bayai & Ikhide, 2018; Githaiga <i>et al.</i> , 2023). | World Bank Mix Market |
| Debt | Independent | Commercial bank loan | The ratio of total debt to equity (Githaiga, 2021). | World Bank Mix Market |
| Average loan size | Control | Average loan size | average loan size divided by the gross national income per capital (Hartarska & Nadolnyak, 2007; Kipesha & Zhang, 2013 | World Bank Mix Market |
| Breadth of outreach | Control | Number of customers served | The natural logarithm of active borrowers (Khalaf <i>et al.</i> , 2023). | World Bank Mix Market |
| Par>30 | Control | Quality of loan portfolio | Loans overdue past 30 days (Tehulu, 2013; Ayayi & Sene, 2010) | World Bank Mix Market |
| Firm size | Control | MFI's asset base | the natural logarithm of its total assets (Bogan <i>et al.</i> , 2007 | World Bank Mix Market |

Source: Authors own creation

4.3. Regression model

We empirically examine the effect financial structure and income diversification on financial sustainability of Kenyan MFIs using the model shown below:

$$OSS_{it} = \beta_0 + \beta_1 ALS_{it} + \beta_2 PAR30_{it} + \beta_3 BOU_{it} + \beta_4 FS_{it} + \beta_5 DTE_{it} + \beta_6 ID_{it} + \beta_7 DTE * ID_{it} + \varepsilon_{it}$$

Where; OSS, is operational self-sufficiency; ALS, average loan size; PAR>30, is portfolio at risk over 30 days; BOU is breadth of outreach; FS, firm size, DTE, debt to equity; ID, income diversification. β_0 is a constant, $\beta_{1...6}$ are beta coefficients. ε_{it} is an error term.

5. Results and discussion

5.1. Descriptive statistics

Table 2 contains descriptive statistics for analysis variables. Average operational self-sufficiency is 1.019, confirming the selected MFIs' financial sustainability. The average loan size 1.652. The average firm size was 8.974. The mean PAR>30 was 0.114. The table shows that the average leverage (DTE) was 2.478. Mean breadth of outreach (BOU) was 4.004. The mean income diversification (ID) was 0.356.

Table II. Descriptive statistics

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|----------|-----|-------|-----------|-------|--------|
| OSS | 320 | 1.019 | .256 | .438 | 1.557 |
| ALS | 320 | 1.652 | .456 | .919 | 2.623 |
| PAR30 | 320 | .114 | .109 | .003 | .576 |
| BOU | 320 | 4.004 | .781 | 2.305 | 5.955 |
| FS | 320 | 8.974 | .699 | 7.622 | 10.225 |
| DTE | 320 | 2.478 | 1.834 | .02 | 7.01 |
| ID | 320 | 0.356 | .089 | .112 | .483 |

Source: Authors' own computation

5.2. Correlation results

Table III provides the correlation matrix of the dependent variable and the explanatory variables. The average loan size (ALS) and OSS are positively correlated (0.410). The table indicates that PAR>30 (-0.183) is negatively and statistically correlated to OSS. Breadth of outreach and OSS are positively correlated as evidenced by the coefficient of 0.354. The correlation between firm size and OSS is positive and significant (0.207). leverage (DTE) is negatively correlated to OSS (-0.329), while income diversification is positive correlated with OSS (0.489). The coefficients are less than 0.8, confirming the absence of multicollinearity.

Table III. Pearson pairwise correlation

| | OSS | ALS | PAR30 | BOU | FS | DTE | ID |
|-------|---------|---------|---------|---------|--------|---------|-------|
| OSS | 1.000 | | | | | | |
| ALS | 0.410* | 1.000 | | | | | |
| PAR30 | -0.183* | 0.151* | 1.000 | | | | |
| BOU | 0.354* | 0.008 | -0.118* | 1.000 | | | |
| FS | 0.207* | 0.297* | 0.131* | 0.658* | 1.000 | | |
| DTE | -0.329* | -0.139* | 0.218* | -0.143* | 0.074 | 1.000 | |
| ID | 0.489* | 0.213* | 0.039 | 0.386* | 0.353* | -0.210* | 1.000 |

Source: Authors own computation

5.3. Regression results

Table IV presents the regression results. The hypotheses are tested using the random effect estimation model as supported by the Hausman test. The findings, presented in model 1, showed that debt capital had a negative and significant effect of OSS ($\beta = -0.305$, $p < 0.05$). Hence, the null hypothesis was rejected and was concluded that debt capital had a significant effect on financial sustainability of microfinance institution in Kenya. The findings are supported by those of earlier studies (Chikalipah, 2019; Githaiga & Bitok, 2023). However, reported Mia and Lee (2017) and Abdulhakim (2020) found a positive association between debt capital and financial sustainability. While Hossain and Khan (2016) found no relationship between debt-to-equity ratio and financial sustainability of MFI in Bangladesh. Similarly, Dabi *et al.*, (2023) found no statistically significant association between debt and financial sustainability of MFIs in Ghana. The findings, presented in model 2, showed that income diversification had a positive and significant effect on OSS ($\beta = 0.394$, $p < 0.05$). Hence, the study concluded that income diversification is a positive driver of MFIs' financial sustainability and the findings relate with those of Githaiga (2022) who used a global data set of microfinance institutions.

The results of model 3 confirm that income diversification moderated the relationship between debt capital and financial sustainability of MFIs ($\beta = -0.281$, $P < 0.05$), therefore leading to the rejection of the null hypothesis H2. Earlie empirical studies have demonstrated a strong association between firms' capital structure and the financial sustainability of MFIs (Githaiga & Bitok, 2023; Bogan *et al.*, 2007). It is crucial to acknowledge that corporate strategic decisions can influence the capital structure (Goddard *et al.*, 2008; Margaritis and Psillaki, 2010). This indicates that both financial decision and strategic decisions are made simultaneously. The effect of income diversification on capital structure and performance can be explained by the coinsurance effect (Lewellen, 1971), transaction costs (Kochhar & Hitt, 1998), and agency costs (Kochhar, 1996; Jensen, 1986). Kochhar and Hitt (1998) confirm that corporate strategy can be used as a basis for understanding the decision-making process related to capital structure. Jensen and Meckling (1976) assert that the adoption of a diversification strategy intensifies the agency problems associated with debt, such as asset substitution. Thus, if managers give priority to the interests of shareholders, they are likely to choose income diversification as a strategy to achieve the specified goals (Jensen, 1986).

Table IV. Regression results

| | Model 1 | Model 2 | Model 3 |
|-----------|----------------|----------------|----------------|
| OSS3 | Coef. | Coef. | Coef. |
| _cons | .702(0.200)** | .642(0.192)** | .861(0.180)** |
| LNALS | .181(0.039) | .177(0.038)** | .142(0.035)** |
| PAR30 | -.266(0.110)** | -.246(0.107)** | -.269(0.099)** |
| BOUT | .111(0.026)** | .105(0.025)** | .071(0.024)** |
| FS | -.007(0.022)** | -.022(0.022) | -.026(0.020) |
| DTE | -.305(0.049)** | -.264(0.049)** | -.209(0.046)** |
| IND | | .497(0.116)** | .394(0.108)** |
| DTE*IND | | | -.280(0.038)** |
| _cons | .702(0.200)** | .642(0.192)** | .861(0.180)** |
| R-squared | 0.3593 | 0.4217 | 0.5236 |
| Wald Chi2 | 110.08 | 136.15 | 214.94 |
| Prob>chi2 | 0.000 | 0.000 | 0.000 |
| Hausman | | | |
| Chi2 | 2.33 | 6.71 | 8.20 |
| Prob>chi2 | 0.8013 | 0.3489 | 0.3151 |

Notes: Std. Err. In parentheses; *p<0.5

Source: Authors' own computation

6. Conclusion

The growth of MFIs has seen unprecedented growth in the last two decade. However, this fast growth not contribute to sustainable poverty alleviation unless MFIs remain financial sustainable. In addition, MFIs are gradually engaging in commercial debt and income diversification to compensate for the declined donations and deteriorating interest income. Consequently, this study examines the nexus between leverage, income diversification and financial sustainability of MFIs in Kenya. To this end, the study uses a panel dataset of 32 MFIs in Kenya during 2010 to 2019 and applies the OLS to test the hypotheses. Our results establish that leverage had a negative effect on financial sustainability of MFIs. On the other hand income diversification had a positive and significant effect on Kenyan MFI financial sustainability. The study further found that income diversification moderated the relationship between leverage and financial sustainability of MFIs. Going by the findings, diversification into non-lending activities may improve MFI financial sustainability. The managerial relevance of the study is enormous. The findings emphasize the need for managers to consider other revenue streams that can lead to financial sustainability. Future researchers should explore the social performance of microfinance firms and how it is driven by their risk management strategies. This study used cross-sectional data due to data unavailability of panel data, thus, we entreat future researchers to explore the nexus using other types of data,

including balanced panel data. Researchers should also explore the impact of the COVID-19 pandemic on the corporate governance practice, risk management practices, loan management practices and sustainability practices of MFIs. Also, studies may consider the specific elements of income diversification such as fee, commission and underwriting on financial sustainability of MFIs.

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