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EDITORIAL

We feel honoured and privileged to present the Bi-Annual Peer Reviewed Refereed Journal, ISSN (Online): 2583-5203, Volume 4, No. 01, June, 2025 among our esteemed readers and academic fraternity.

This Journal is the outcome of the contributions of insightful research-oriented papers/articles by various eminent academicians, and research scholars in a highly organized and lucid manner with a clear and detailed analysis related to the emerging areas in the fields of Social Sciences and Allied Areas.

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We also express our sincere thanks and gratitude to all the contributors to research papers/ articles who have taken pain in preparing manuscripts, incorporating reviewer(s) valuable suggestions and cooperating with uxs in every possible way.

We also express our heartfelt gratitude to all the esteemed members of the Editorial Board, Esteemed Reviewer(s) who despite their busy schedules have given their valuable time, suggestions and comments to enrich the quality of the contributory resears paper(s) in bringing to light this June issue.

Last, but not least, we revere the patronage and moral support extended by our parents and family members whose constant encouragement and cooperation made it possible for us to complete on time.

We would highly appreciate and look forward to your valuable suggestions, comments and feedback at **editorbr2022@gmail.com**

June, 2025
West Bengal, India

PEMA LAMA
Editor-in-Chief

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RESEARCH ARTICLE

Financial Sustainability of Indian Microfinance Institutions (MFIs): An Empirical Assessment of Asset Value and Profitability Indicators

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Index Terms: Microfinance Institutions | Return of Assets | Return on Equity | Operational | Self–Sufficiency.

ABSTRACT

This study delves into the financial sustainability of Microfinance Institutions (MFIs) in India by exploring how institutional size and capital composition impact core profitability metrics such as Return on Assets (ROA), Return on Equity (ROE), and Operational Self-Sufficiency (OSS). Drawing on a decade of sectoral data from Sa-Dhan reports, the analysis evaluates how variations in asset base and debt-equity ratio influence financial outcomes. Asset value serves as a proxy for institutional scale and efficiency, while the debt-equity ratio reflects financial leverage and risk exposure.

Through multiple regression analysis, the study uncovers directional patterns between structural indicators and profitability, despite the absence of strong individual statistical significance due to a limited dataset. The findings underscore that asset expansion generally correlates with improved financial performance, whereas excessive reliance on debt may undermine sustainability. These insights are relevant for institutional strategists, investors, and policymakers committed to strengthening the financial resilience of MFIs and enhancing the long-term goals of financial inclusion.

1 INTRODUCTION

Microfinance plays a pivotal role in advancing financial inclusion in India by extending customised financial services to low-income households and underserved regions, particularly in rural and semi-urban areas. What began as informal savings and lending practices through Self-Help Groups (SHGs) has gradually evolved into a more formal and structured system comprising diverse institutional actors, including Non-Banking Financial Companies. Microfinance Institutions (NBFC-MFIs), Small Finance Banks (SFBs), mainstream banks, and non-governmental organisations. Together, these entities form a multi-tiered framework aimed at improving access to credit and promoting financial resilience among economically weaker sections.

Recent data from the Sa-Dhan Bharat Microfinance Report, 2023, indicates that the sector has grown substantially, with a gross loan portfolio exceeding 3.48 lakh crore and outreach extending to more than 6.6 crore borrowers. NBFC-MFIs continue to lead in terms of market share, supported by the growing involvement of banks and SFBs. Public initiatives such as the Pradhan Mantri Jan Dhan Yojana (PMJDY), MUDRA scheme, and the National Rural Livelihoods Mission (NRLM) have further reinforced this momentum. Additionally, the integration of digital platforms, such as mobile banking and Unified Payments Interface (UPI), has enhanced operational efficiency and service delivery.

Despite this progress, questions remain about the long-term sustainability of the sector. For microfinance institutions to remain viable, they must demonstrate financial robustness, manage risks effectively, and

maintain steady liquidity. Profitability metrics such as Return on Assets (ROA), Return on Equity (ROE), and Operational Self-Sufficiency (OSS) are crucial for evaluating institutional health and efficiency. While prior research has primarily examined access to credit and client outreach, there is limited empirical analysis of how internal financial variables such as asset size, leverage, and operational scale affect profitability in the Indian context. This study seeks to address that gap by analysing a decade's worth of data to explore the financial performance of MFIs operating in India.

2 LITERATURE REVIEW

De Crombrugghe et al. (2008) provide a nuanced assessment of self-sustainability among MFIs, emphasising cost coverage, loan repayment, and cost control. Their regression analysis suggests that financial sustainability is achievable without necessarily increasing loan size or monitoring expenses, but through more effective interest rate policies and higher borrower loads per field officer, especially in group lending models. Bi and Pandey (2011) conduct a comparative analysis of MFIs and commercial banks, assessing financial structure, profitability, and efficiency. Their study acknowledges the microfinance sector's rapid growth but highlights the need for improved governance and accounting standards. The limited banking access in India underlines the important complementary role played by MFIs in expanding financial services.

Jørgensen (2011) explores the internal and external factors influencing profitability in MFIs. Her findings suggest that variables like capital structure, institutional maturity, and the size of the gross loan portfolio significantly affect financial performance. Importantly, the study challenges the notion that profitability stems from charging high interest rates, instead pointing to sound management and broad outreach as key drivers. Interestingly, the research also notes that a larger number of active borrowers can negatively impact profitability, illustrating the complexities in managing scale and sustainability. Microfinance continues to play a vital role in expanding financial services to underserved rural regions in India, where access to formal banking remains limited. As noted by Manoharan and Rupa (2014), the sector has evolved from informal aid-based models to structured, market-oriented mechanisms that support economic development. Their analysis points to improved financial performance among Indian MFIs, with indicators such as Return on Equity (ROE) and Operational Self-Sufficiency (OSS) reflecting gradual progress. However, they also highlight the difficulty institutions face in fully covering operational costs, stressing the importance of technological upgrades and supportive regulation to strengthen outreach and efficiency.

Narwal and Yadav (2014) focus on the influence of institutional characteristics such as size and branch network on outreach and profitability. Their panel data study of 42 MFIs finds that larger size and greater office presence positively affect performance, suggesting economies of scale and improved access contribute to better outcomes. However, they also note limitations due to inconsistent data availability in the sector. Ramaiah (2014) highlights a shift in the microfinance ecosystem following the implementation of the SHG-Bank Linkage Programme. A reduction in savings-based Self-Help Groups was observed, coupled with increased outstanding loans and a rise in non-performing assets. Despite these challenges, the study reinforces the role of microfinance in enhancing women's empowerment and advancing financial inclusion. It also stresses the ongoing need for better program design and stronger collaboration among stakeholders, including banks, NGOs, and public institutions.

Wondirad (2020) introduces the dimension of competition in the Indian microfinance market, measured through the Boone Indicator. His analysis reveals that competition positively moderates the relationship between MFIs' social outreach and financial performance. Specifically, in competitive markets, deepening outreach contributes more significantly to operational self-sufficiency. This insight highlights the dynamic interplay between market forces and MFI performance outcomes. The financial performance of MFIs is further detailed by Srikanth and Srinivas (2022), who examine data from 2017 to 2021 and confirm strong financial indicators such as return on

equity and operational self-sufficiency. They also identify persistent gaps where operational costs remain high, limiting overall profitability. These findings resonate with the observations made in earlier studies, indicating consistent challenges in cost management despite revenue growth. Collectively, these studies establish that while Indian MFIs have demonstrated significant progress in outreach, financial performance, and sustainability, challenges remain in cost management, regulatory oversight, and balancing social and financial goals. Factors such as institutional characteristics, market competition, and evolving operational practices continue to shape MFI outcomes.

3 SIGNIFICANCE OF THE STUDY

The financial viability of MFIs plays a pivotal role in advancing inclusive finance in India. Although outreach and credit expansion have been widely studied, there is limited research linking profitability outcomes to asset base and capital structure. This study takes a structured approach to evaluate how these internal financial parameters influence profitability. By focusing on the interaction between asset size and the debt-equity ratio, the study provides a comprehensive view of sustainability drivers. The findings hold practical relevance: MFI managers can refine operational strategies, policymakers can develop informed capital norms, and investors may use the insights to evaluate institutional resilience. The research thus supports both academic inquiry and practical policymaking.

4 RESEARCH GAP

While existing studies on microfinance largely focus on outreach and poverty reduction, limited attention has been given to the financial performance and long-term sustainability of microfinance institutions in India. Most available reports are descriptive and lack empirical analysis of key financial indicators such as ROA, ROE, OSS, and debt-equity ratio. This creates a gap in understanding how profitability is maintained alongside social objectives. The present study attempts to bridge this gap using ten years of data to analyse the financial trends and performance of Indian MFIs.

5 OBJECTIVES OF THE STUDY

The objectives of the study are as follows -

- To measure the variation in ROA, ROE, and OSS among Indian MFIs across ten years.
- To assess the relationship between asset size and profitability indicators.
- To evaluate the influence of the debt-equity ratio on ROA, ROE, and OSS.
- To determine the combined effect of asset size and debt-equity ratio on MFI profitability through regression analysis.

6 RESEARCH METHODOLOGY

The research adopts a quantitative approach grounded in secondary data from Sa-Dhan's annual reports spanning 2014-15 to 2023-24. These sector-wide reports offer reliable median values for key performance indicators.

Variables Used and Classification

Five financial variables have been selected for this study. These are classified into dependent and independent variables, based on their functional relationship with the profitability of MFIs.

Dependent Variables

- Return on Assets (ROA)
- Return on Equity (ROE)
- Operational Self-Sufficiency (OSS%)

These variables have been chosen as dependent variables because they directly reflect the profitability and financial sustainability of MFIs. ROA and ROE are commonly used accounting measures of profitability, while OSS (%) is a sector-specific indicator that captures the institution's ability to cover operational costs without relying on external support.

Independent Variables

- Asset Value
- Debt-Equity Ratio

These have been selected as independent variables because they are considered potential determinants of profitability. Asset Value reflects the size and scale of operations, which may affect the ability to generate income efficiently. The Debt-Equity Ratio indicates the capital structure and financial leverage of MFIs, which can influence the cost of capital and ultimately impact profitability.

Statistical Tools Used

The following statistical tools have been applied:

- *Descriptive Statistics* have been used to summarise the basic characteristics of each variable, including measures of central tendency and dispersion.
- *Correlation Analysis* has been employed to examine the strength and direction of association between the selected variables.
- *Multiple Regression Analysis* has been applied to determine the effect of Asset Value and Debt-Equity Ratio (independent variables) on ROA, ROE, and OSS% % (dependent variables). The models have been used to identify statistically significant predictors of profitability.

Justification for Methodology

A quantitative approach has been adopted as it allows for the objective examination of numerical data. The use of secondary data from Sa-Dhan ensures reliability and consistency, as the reports are compiled using audited and standardised financial statements of MFIs. The classification of variables is grounded in financial theory and empirical studies on MFI performance. The selected statistical techniques are suitable for evaluating the relationships between structural financial indicators and profitability outcomes.

7 DATA ANALYSIS AND INTERPRETATION

Table 1
DESCRIPTIVE STATISTICS

Variables	Mean	Standard Deviation	Minimum	Maximum	Jarque-Bera (Probability)
Return on Assets (%)	1.978	0.916	0.640	4.060	0.405
Return on Equity (%)	9.480	4.782	2.836	19.280	0.788
Operational Self–Sufficiency (%)	113.10	4.408	105.00	122.00	0.912
Assets Value (In Crore)	94460.50	55278.01	46247.00	221880	0.203
Debt-Equity Ratio	3.020	0.262	2.700	3.400	0.622

Source: Calculation in E-Views

Table 1 presents the descriptive statistics of the variables used in the study. The mean values indicate the average performance across the ten years, while the standard deviations reflect the degree of variability. The Jarque-Bera probability values suggest that all variables are approximately normally distributed. The minimum and maximum values show the range within which each variable fluctuated.

Table 2
CORRELATION ANALYSIS

Variables	Return on Assets	Return on Equity	Operational Self-Sufficiency	Assets Value	Debt–Equity Ratio
Return on Assets	1.000	0.978	0.894	0.600	-0.590
Return on Equity	0.978	1.000	0.870	0.497	-0.545
Operational Self-Sufficiency	0.894	0.870	1.000	0.615	-0.667
Assets - Value	0.600	0.497	0.615	1.000	-0.434
Debt–Equity ratio	-0.590	-0.545	-0.667	-0.434	1.000

Source: Calculation in E- Views

Table 2 presents the Pearson correlation coefficients among the selected variables. The results indicate that Return on Assets (ROA), Return on Equity (ROE), and Operational Self-Sufficiency (OSS%) are all positively and strongly correlated with each other, suggesting that these profitability measures move closely together. Asset Value shows a moderate positive correlation with the profitability indicators, while the Debt-Equity Ratio is negatively correlated with them, implying that a higher proportion of debt in capital structure may reduce profitability.

Regression Analysis

Multiple Regression Analysis

- **Model 1 (Dependent Variable: ROA)**

To examine the influence of selected financial indicators on profitability, a multiple regression was conducted with Return on Assets (ROA) as the dependent variable. The independent variables were Asset Value and Debt-Equity Ratio. The regression results are summarised in Table 3.

Table 3
REGRESSION RESULTS - DEPENDENT VARIABLE ROA

Variable	Co-efficient (β)	Standard Error	t-Statistics	P-value
Assets Value (In Cr.)	0.00000702	0.00000495	1.420	0.199
Debt–Equity Ratio	-1.422	1.045	-1.360	0.216
R-Squared	0.494			
F- Statistics	3.415			

Source: Calculation in E-Views

The model shows an R-squared value of 0.494, indicating that around 49.4% of the variation in ROA is explained by the two independent variables. The F-statistic is 3.415 with a p-value of 0.092, suggesting the model is moderately significant at the 10% level, though not at the conventional 5% level. While the direction of influence for both variables align with theoretical expectations, neither variable shows statistical significance at the 5% level.

- **Model 2 (Dependent Variable: ROE)**

This model examines how asset size and debt-equity structure influence the Return on Equity (ROE) of MFIs. ROE is used as the dependent variable, and Asset Value, along with Debt-Equity Ratio, are taken as independent variables. The regression outcomes are summarized in Table 4.

Table 4
REGRESSION RESULTS - DEPENDENT VARIABLE ROE

Variable	Co-efficient (β)	Standard Error	t-Statistics	P-value
Assets Value (In Cr.)	0.0000278	0.0000286	0.972	0.364
Debt–Equity Ratio	-7.410	6.037	-1.227	0.259
R-Squared	0.380			
F- Statistics	2.148			

Source: Calculation in E- Views

The model accounts for 38% of the variation in ROE (R-squared = 0.380), but the overall model fit is not statistically significant (p = 0.187). While Asset Value shows a positive coefficient and Debt-Equity Ratio a negative one, neither is statistically significant at the 5% level. The standard errors indicate some variability in the estimates, especially for the constant term and the leverage variable.

- **Model 3 (Dependent Variable: OSS)**

In this third model, Operational Self-Sufficiency (OSS%) is taken as the dependent variable, and the explanatory variables are Asset Value and Debt-Equity Ratio. This regression helps determine how size and leverage influence the operational sustainability of Microfinance Institutions (MFIs).

Table 5
REGRESSION RESULTS - DEPENDENT VARIABLE OSS

Variable	Co-efficient (β)	Standard Error	t-Statistics	P-value
Assets Value (In Cr.)	0.0000320	0.0000218	1.468	0.185
Debt–Equity Ratio	-8.296	4.608	-1.800	0.115
R-Squared	0.575			
F- Statistics	4.741			

Source: Calculation in E- Views

This model explains approximately 57.5% of the variation in Operational Self-Sufficiency among MFIs, as reflected by the R-squared value of 0.575. The model is statistically significant at the 5% level, given the F-statistic (4.741) and p-value (0.050). The coefficient for Asset Value is positive, suggesting that larger MFIs tend to be more operationally self-sufficient. The negative coefficient or Debt–Equity Ratio implies that increased leverage may weaken operational sustainability. However, neither explanatory variable is statistically significant individually, as their p-values are above 0.05.

8 OVERALL FINDINGS

The analysis reveals that asset size shows a consistent positive relationship with profitability indicators, suggesting that larger MFIs tend to achieve better financial outcomes, likely due to scale efficiencies. Conversely, a higher debt-equity ratio is negatively associated with ROA, ROE, and OSS, indicating that excessive reliance on borrowed funds may undermine sustainability.

While the regression models demonstrated meaningful trends, the limited sample size reduced statistical significance in individual predictors. Nonetheless, the overall directions of impact are consistent with established financial theory. These insights highlight the critical role of institutional structure in influencing MFI profitability and sustainability.

9 KEY RECOMMENDATIONS

Based on the empirical analysis, the following recommendations are proposed:

- Promote asset strengthening: MFIs should focus on building their asset base through sound portfolio management, as larger asset sizes are linked to improved profitability and operational self-sufficiency.
- Adopt cautious leverage strategies: Institutions should avoid overdependence on debt financing. A balanced debt-equity structure is essential for maintaining financial health and long-term sustainability.
- Design equity-friendly policies: Policymakers and regulators could consider introducing incentives or support mechanisms to encourage equity-based funding among MFIs, helping them reduce financial risk.
- Strengthen sector-level data practices: Enhanced transparency in reporting at both institutional and sectoral levels will improve the accuracy and depth of future research.

10 CONCLUSION

This study explores the relationship between institutional scale, capital structure, and the profitability of Indian MFIs using ten years of sectoral data. Although individual coefficients were not statistically significant due to the small sample size, the overall regression patterns underscore that larger asset bases contribute positively to operational and financial performance, while higher leverage may hinder it. These findings reinforce the need for strategic asset expansion and prudent debt management.

The study contributes to the broader understanding of financial sustainability in microfinance and offers a platform for future research that may include additional performance drivers and firm-level analysis.

11 LIMITATIONS OF THE STUDY

While the study provides valuable insights into the financial performance of Indian MFIs, certain methodological and data-related aspects may influence the scope of its conclusions:

- *Limited sample size*: The analysis is based on ten years of sector-level median data, which may limit statistical inference and reduce the explanatory power of individual predictors.
- *Aggregate-level analysis:* As the study uses industry-wide data from Sa-Dhan, it does not capture differences across individual MFIs or regional variations.
- *Restricted variable scope:* Only asset size and debt-equity ratio were included as explanatory variables due to data availability, excluding other factors such as portfolio quality or operational efficiency.

- *Absence of causal analysis:* While regression helps identify associations, it does not establish causality. Future studies with disaggregated data may help address this limitation.

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