Navigating the Cascading Ripples: A Study on the Interplay between the COVID-19 Recession and the Financial Fortunes of Micro Finance Institutions (MFIs)

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ABSTRACT

Purpose: *The success of Micro Finance Institutions (MFIs) hinges on effective decision-making amidst challenging economic circumstances, necessitating the ability to anticipate and navigate future business conditions. This research aims to explore the relationship between financial performance and the COVID-19 pandemic's impact on MFIs listed on the National Stock Exchange (NSE) in India. By analyzing financial data and employing statistical techniques, the study seeks to elucidate the resilience of MFIs during the pandemic and the role of financial ratios in predicting earnings per share (EPS). Additionally, the research aims to contribute to a deeper understanding of the interplay between financial indicators and organizational outcomes within the microfinance sector.*

Design/Methodology/Approach: *This research adopts a quantitative approach, utilizing secondary data obtained from quarterly financial reports of selected MFIs listed on the NSE from 2018 to 2022. Statistical analyses such as paired t-tests, correlation, and regression are employed to assess the impact of the COVID-19 pandemic recession on MFIs' profitability and to investigate the relationship between financial ratios and earnings per share (EPS).*

Findings/Result: *Despite the COVID-19 pandemic recession, the profitability of Indian Micro Finance Institutions (MFIs) remained largely unaffected, as indicated by non-significant differences in earnings before interest and taxes (EBIT) before and after the pandemic. Regression analysis highlighted significant influences of financial ratios like the current ratio, total asset ratio, net profit ratio, and gross profit ratio on earnings per share (EPS), underscoring the sector's resilience and the importance of financial analysis in predicting MFI performance.*

Originality/Value: *This research offers novel insights into the resilience of Indian Micro Finance Institutions (MFIs) during the COVID-19 pandemic and underscores the significance of financial analysis in guiding strategic decision-making processes within the microfinance sector.*

Paper Type: *Empirical Research.*

Keywords: Microfinance sector, Pandemic impact, Financial resilience, Earnings per share analysis, Regression modeling

1. INTRODUCTION :

In the ever-evolving landscape of the Indian economy, the Microfinance Institutions (MFIs) sector emerges as a beacon of rapid progress, offering an array of services ranging from microfinance consulting to community-based financial solutions [1]. With its origins tracing back to the inception of pioneering microfinance organizations, India's MFI sector has flourished into a diverse realm, encompassing microfinance services, inclusive financial solutions, and community development initiatives [2-3]. The evolution of this sector has been characterized by an unwavering commitment to empowerment, driven by local market dynamics and the imperative to foster financial inclusion [4-5]. However, the onset of the COVID-19 crisis has cast a shadow of uncertainty, compelling MFIs across the nation to navigate the challenges of sustaining operations amidst economic volatility and resource constraints [6-7]. Amid these challenges, the foremost priority remains the welfare of clients and stakeholders, prompting a paradigm shift in service delivery models, including the adoption of digital financial services and remote outreach strategies. In this era of unprecedented disruption, the role of MFIs has surged to unprecedented prominence, emerging as pivotal actors in fostering resilience and economic recovery at the grassroots level. As communities grapple with the aftermath of the pandemic, the reliance on MFI services and support has intensified, ushering in a new era where microfinance plays a central role in enabling financial empowerment and sustainable development [8]. In this transformative phase, MFIs stand poised to redefine the landscape of financial inclusion and social impact, solidifying their position as catalysts for inclusive growth and resilience in the post-pandemic era.

The microfinance sector, which is expected to grow by $ 122.46 billion globally from 2021 to 2026 at a compound annual growth rate of 11.61%, is crucial for poverty alleviation efforts, as highlighted by a joint study by PricewaterhouseCoopers (PwC) and the Association of Microfinance Institutions of India [9]. Furthermore, its impact on India's economy, with a projected contribution of 2.7% to 3.5% to Gross Value Added (GVA) by 2025-26, underscores its significance in fostering economic growth and development [10]. Micro-finance institutions (MFIs) play a pivotal role in fostering financial inclusion, particularly in regions where traditional banking services are lacking or inaccessible [11-12]. Understanding the operations, challenges, and successes of these institutions can shed light on the efficacy of their strategies in reaching the financially underserved populations, thereby contributing to poverty alleviation and economic development [13-15]. MFIs bridge this gap by providing accessible financial services to the unbanked and underserved segments of society, empowering individuals, especially women and small-scale entrepreneurs, to improve their livelihoods and escape the cycle of poverty [16-18]. Moreover, MFIs offer formalized and regulated avenues for credit, savings, and insurance, thereby fostering financial inclusion and resilience [19-20]. They play a crucial role in leveraging digital finance solutions to reach even remote areas, driving economic growth, and promoting sustainable development [21].

The pandemic has significantly impacted the microfinance sector, leading to disruptions in operations, reduced borrower income, increased loan defaults, and heightened financial instability among microfinance institutions [22]. Furthermore, the pandemic-induced economic downturn has exacerbated existing challenges faced by MFIs, such as liquidity constraints and decreased investor confidence [23]. Additionally, the economic downturn resulting from the pandemic has exacerbated poverty levels [24], further challenging the ability of MFIs to serve their clients effectively [25]. Against this backdrop, the study underscores the importance of examining the repercussions of the COVID-19 recession on the financial performance of MFIs. Focusing on selected MFI listed with NSE, this study delves into both short-term and long-term financial analyses. By scrutinizing the financial health of these companies, the research aims to shed light on the intricate interplay between the pandemic-induced economic downturn and the resilience of the microfinance sector.

Financial performance analysis serves as a fundamental tool for assessing the fiscal soundness of a firm, elucidating its financial strengths and vulnerabilities through a meticulous examination of its balance sheet and profit and loss account. This analytical endeavor transcends temporal boundaries, encompassing both short-term exigencies and long-term strategic planning by facilitating insightful forecasting and the identification of prospective growth avenues. Moreover, the scrutiny of financial performance garners keen interest from an array of stakeholders, including trade creditors, bondholders, and investors, each with distinct concerns pertaining to liquidity, cash flow, and earnings stability. Given the profound impact of India's burgeoning microfinance sector on the nation's economic trajectory, a thorough evaluation of critical metrics such as investment, sales, profit, and overall profitability emerges as imperative [26-27]. Consequently, a comprehensive analysis encompassing both profitability and liquidity metrics becomes indispensable for gauging the growth trajectory and holistic development of companies operating within the microfinance domain. Thus, the pursuit of a robust financial analysis framework stands as a prerequisite for fostering transparency, informed decision-making and sustainable growth within the microfinance sector, thereby underpinning its pivotal role in the broader economic landscape.

The microfinance sector stands as a notable success story within India, despite its relative youth compared to other industries. Its rapid growth and development have garnered global attention, positioning India as a significant player in poverty reduction and the improvement of living standards. While the industry's size may not be immense, its impressive growth trajectory throughout the nineties and subsequent decades has propelled it onto the world stage. This swift expansion has piqued the interest of researchers across various disciplines such as Finance, Marketing, and Human Resource Management. Therefore, examining the profitability of this sector and the factors influencing it becomes a compelling endeavor. Profitability can be influenced by numerous factors, both internal and external. The onset of the COVID-19 recession swiftly altered the business landscape, posing challenges for many companies to navigate through turbulent times. This study, titled " Navigating the Cascading Ripples: A Study on the Interplay between the COVID-19 Recession and the Financial Fortunes of Micro Finance Institutions (MFIs)," aims to analyze the financial performance of Micro Finance Institutions (MFIs) before and after the recession, as well as investigate the influence of financial ratios on their profitability.

2. LITERATURE REVIEW :

India, among developing nations, has a notably extensive financial system [28-29]. This extensive financial depth can be largely attributed to its vast array of financial institutions, especially those tailored to serve rural clientele [30]. Nevertheless, there is a pressing need to enhance financial inclusion for India's impoverished population, as the majority of who reside in rural regions [31-32]. The penetration of microfinance in the country was non-uniform; with state-specific contextual factors playing a major role in driving microfinance growth [33]. The microfinance sector holds a formidable position in India, consistently maintaining its upward trajectory regardless of the country's economic conditions [34]. With its significant impact on financial inclusion and role as a key driver of economic empowerment for marginalized communities, the microfinance sector in India has garnered considerable attention from both domestic and international investors [35-37]. Due to their significant impact on financial inclusion and economic empowerment, microfinance institutions (MFIs) remain highly relevant in India's socio-economic landscape [38-40].

Assessing the financial performance of MFIs is crucial as it mirrors the efficacy of their operations [41-44]. While productivity growth in service firms typically lags behind manufacturing, the literature extensively links the organizational factors in microfinance institutions with financial performance [45-50]. Managers rely on both financial and non-financial performance metrics to gauge their organization's progress towards financial goals. Return on equity (ROE) and Earnings Per Share (EPS) stand out as effective measures to evaluate a company's financial performance [51-52]. Studies indicate that several organizations experienced an increase in leverage ratio and activity ratio, but a decrease in liquidity ratio and profitability ratio during the pandemic recession [53]. Microfinance institutions (MFIs) play a crucial role in filling this gap by offering financial services to that in need [54]. Assessing the financial health of MFIs is important because it reflects how well they're doing. Studies show that during the pandemic, some MFIs saw changes in their financial ratios, like more debt and activity, but less cash and profit. To cope with economic challenges like the pandemic, MFIs need to be flexible and use technology to reach more people efficiently [55].

3. OBJECTIVES OF THE STUDY :

(1) To analyze the profitability of the selected MFIs listed in NSE before and after the onset of the COVID-19 recession.

(2) To examine the impact of financial ratios on the profitability of the Micro Finance Institutions (MFIs).

4. HYPOTHESES OF THE STUDY :

(1) H_{01}: There is no impact of Covid 19 recession on the profitability of MFIs in India

(2) H_{02}: There is no significant impact of financial ratios on the EPS of Micro Finance Institutions (MFIs)

5. RESEARCH METHODOLOGY :

The research is grounded on secondary data sourced from published quarterly financial reports of selected MFIs listed in National Stock Exchange. Specifically, Satin Creditcare, Credit Access Grameen, Muthoot Microfin, and Fusion Micro Finance were chosen due to their prominent market presence. Data spanning four years, from 2018 to 2022, was collected from these quarterly reports for analysis. Additionally, information was gleaned from articles published in reputable business newspapers, journals, and online sources. Statistical methods including paired t-tests, as well as correlation and regression analyses, were employed to scrutinize the hypotheses under study.

6. ANALYSIS :

Objective 1: To analyze the profitability of the selected MFIs in NSE before and after the onset of the COVID-19 recession

To understand the influence of the COVID-19 pandemic on the profitability of the Micro Finance Sector, it's imperative to assess financial outcomes both before and after the pandemic's onset. To address this objective, the following hypotheses were formulated and tested using paired t-tests

H_{01}*: *There is no impact of Covid 19 recession on the profitability of MFIs in India

Table 1: Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
EBIT Before Pandemic	58632.4816	8	18975.624	4784.348
EBIT After Pandemic	48868.2147	8	19245.166	6243.176

The mean value of EBIT for the selected MFIs before the Covid-19 pandemic was ₹58,632.4816 with a standard deviation of ₹18,975.624, while after the pandemic recession, the mean EBIT was ₹48,868.2147 with a standard deviation of ₹19,245.166.

Table 2: Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference: Lower	Upper			
EBIT Before EBIT After	4460.22	7546.33	3261.266	-1332. 873	11463.073	1.775	7	.103

The t-value of 1.775 with 7 degrees of freedom (df) indicates that the difference between the EBIT before and after the COVID-19 pandemic recession is not statistically significant, as the p-value of the two-tailed test is 0.103, which is greater than the significance level of 0.05. Therefore, we accept the null hypothesis, suggesting that there is no significant impact of the COVID-19 pandemic recession on the profitability of MFIs in India.

Objective 2: To examine the impact of financial ratios on the profitability of the Micro Finance Institutions (MFIs)

To analyze the influence of financial ratios on the financial performance of MFIs, a regression model was employed. The details of the fitted model are provided below:

$Y=\beta0+\beta1X1+\beta2X2+\beta3X3+\beta4X4+\beta5X5+\beta6X6+ \in$

Where;

Y=EPS

X1 = Current Ratio

X2 = Quick Ratio

X3 = Fixed Assets Ratio

X4 = Total Assets Turnover Ratio

X5 = Net Profit Ratio

X6 = Gross Profit Ratio
β1, β2, B6= Regression coefficients of predictor variables.
∈ = Random Error
Following hypothesis were formulated
H_{02}: There is no significant impact of financial ratios on the EPS of Micro Finance Institutions (MFIs)
The correlations as well as the significant effects between the six factors and dependent variables were shown in Table 3:

Table 3: Correlation between Variables

	Earning Per Share	**Current Ratio**	**Quick Ratio**	**Fixed Asset Ratio**	**Total Asset Ratio**	**Net profit Ratio**	**Gross Profit Ratio**
Earning Per Share	1.000						
Current Ratio	.232	1.000					
Quick Ratio	.128	.515	1.000				
Fixed Asset Ratio	-.166	-.178	-.532	1.000			
Total Asset Ratio	.192	-.006	.288	-.748	1.000		
Net profit Ratio	.127	.024	-.121	.300	-.486	1.000	
Gross Profit Ratio	.005	.097	-.101	.480	-.567	.853	1.000

The correlation matrix reveals that all factors except the Gross Profit Ratio exhibit positive correlations with the dependent variable, Earning Per Share (EPS), indicating a relationship with the EPS of the companies. Among these, the strongest correlation is observed between the Current Ratio and the dependent variable, with a correlation coefficient of 0.232. However, it's important to note that the correlations observed are not particularly strong overall between the dependent and independent variables.

Table 4: Adjusted R Value

Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Durbin-Watson**
1	.438[a]	.191	.159	24.33572	.498

a. Predictors: (Constant), Gross Profit Ratio, Current Ratio, Fixed Asset Ratio, Quick Ratio, Total Asset ratio, Net profit Ratio

b. Dependent Variable: Earning Per Share

The R Square was .191, means that the variability in EPS can be explained by the six factors included in the regression model. The F-ration tests whether the regression model was a good fit for the data. The ANOVA result was in the following Table.

Table 5: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	294.228	5	57.831	.828	.545[b]
Residual	342.399	5	69.284		
Total	636.627	10			

a. Dependent Variable: Return on Equity
b. Predictors: (Constant), Gross Profit Ratio,Nt Profit Ratio, Total Asset Ratio, Current Ratio, Fixed Asset Ratio, Quick Ratio

With F(5, 5) = 828 and p < .001, the Current Ratio, Quick Ratio, Fixed Assets Ratio, Total Assets to Turnover Ratio, Gross Profit Ratio, and Net Profit Ratio collectively demonstrate a significant impact on the EPS of MFIs. Thus, the null hypothesis, which suggests no relationship between the Financial Ratios and EPS, is rejected. These findings indicate that the financial performance variables examined, including Current Ratio, Quick Ratio, Fixed Assets Ratio, Total Assets to Turnover Ratio, Gross Profit Ratio, and Net Profit Ratio, play a crucial role in influencing the earnings per share of Micro Finance Institutions (MFIs).

Table 6: Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-38.142	22.015		-1.425	.105
Current Ratio	11.992	4.563	.316	3.482	.001
Quick Ratio	-1.236	4.888	-.035	-.246	.776
Fixed Asset Ratio	26.131	23.829	.245	1.484	.315
Total Asset Ratio	33.824	11.404	.331	2.788	.004
Net profit Ratio	2.687	.765	.487	3.586	.000
Gross Profit Ratio	-1.216	.555	-.685	-2.387	.018

a. Dependent Variable: Earning Per Share

Given that the p-value is less than .05, it suggests that the independent variables such as Current Ratio, Total Asset Ratio, Net Profit Ratio, and Gross Profit Ratio are significant predictors of the dependent variable Earning Per Share. However, the variables Quick Ratio and Fixed Asset Ratio do not seem to have a meaningful contribution to Earnings per Share.

7. FINDINGS :

The major findings are as follows;

(1) Earnings before interest and taxes (EBIT) for selected MFIs showed non-significant differences before and after the pandemic, indicating resilience within the microfinance sector amidst economic challenges.

(2) Financial ratios such as current ratio, total asset ratio, net profit ratio, and gross profit ratio significantly influenced earnings per share (EPS) of MFIs, emphasizing the importance of financial analysis in predicting financial performance.

(3) Positive correlations were observed between various financial ratios and EPS, with the current ratio exhibiting the strongest correlation among the variables examined.

(4) Financial ratios collectively had a significant impact on MFI profitability, as indicated by ANOVA results, highlighting their role in determining earnings per share.

(5) While some financial ratios like current ratio, total asset ratio, net profit ratio, and gross profit ratio were significant predictors of EPS, others such as quick ratio and fixed asset ratio showed less meaningful contributions.

8. RECOMMENDATIONS :

The major recommendations are as follows;

(1) Enhance the monitoring of financial performance indicators, ensuring real-time insights into the fiscal health of MFIs and enabling proactive decision-making.
(2) Develop and implement liquidity management strategies that strike a balance between short-term liquidity needs and long-term financial sustainability, thereby mitigating liquidity risks during economic downturns.
(3) Prioritize efforts to strengthen key financial ratios such as current ratio, total asset ratio, net profit ratio, and gross profit ratio through targeted operational improvements and strategic initiatives.
(4) Cultivate a culture of continuous improvement within MFIs, encouraging innovation and agility in response to evolving market dynamics and regulatory changes.
(5) Invest in advanced data analytics tools and technology infrastructure to enhance financial analysis capabilities, drive operational efficiency, and support informed decision-making processes.

9. CONCLUSION :

Financial performance analysis serves as a vital tool for understanding a company's financial status and operational effectiveness. This study focuses on evaluating the impact of the COVID-19 pandemic on profitability of MFIs, utilizing various financial metrics. Through the examination of ratios such as Current Ratio, Quick Ratio, Fixed Assets Ratio, Total Assets to Turnover Ratio, Gross Profit Ratio, and EPS, the research aims to uncover insights into the financial performance of selected MFIs listed in National Stock Exchange (NSE). Despite the challenges posed by the pandemic, the analysis reveals that it did not significantly disrupt the profitability of Indian MFIs. Moreover, the study demonstrates the substantial influence of financial ratios on EPS, highlighting their importance in understanding and predicting the financial performance of these firms. Overall, this research sheds light on the resilience of the micro finance sector amidst economic uncertainties and emphasizes the significance of financial analysis in guiding strategic decision-making processes.

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