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Impact of Financial Management Decisions on the Profitability of Microfinance Institutions in Bangladesh

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Abstract

The research examines the effect of financial management decisions, such as financial decisions, capital management, and operating cash flows, on the profitability of 12 microfinance institutions in Bangladesh for four years, from 2015 to 2018. The financial management decisions are represented by the natural log of the outstanding loan, borrowing cost ratio, operating cost to total income, operating self-sufficiency, and capital fund to loan outstanding ratio. Return on assets (ROA) has been utilized to estimate the profitability of microfinance institutions. The results were analyzed using the panel data regression model. Borrowing cost ratio, operating cost to total income, operating self-sufficiency, and capital fund to loan outstanding ratio are all significant determinants of microfinance institution profitability, while the natural log of the outstanding loan is a non-significant determinant. The ratio of borrowing cost and operating cost to total income have highly and negatively linked to the profitability of a microfinance institution. The operating self-sufficiency and capital fund to outstanding loan ratio have a substantial and favorable association with the microfinance institution's performance.

Keywords: Profitability, microfinance institutions, borrowing, financial decision, and operating cash.

Introduction

Profit maximization is one of the firm's main goals. As part of the financing decision, financial management assesses the cost of capital and financial risks for various possibilities before deciding on the proportion of the money raised through members' funds and borrowed funds. Financial management is the viable activity of planning and controlling the firm's financial resources. Financing decisions, fund management decisions, and operating cash flows are the three major components of a financial manager. These decisions have the greatest impact on a company's profitability. The proportion of various financial resources, such as capital and borrowing, is decided by the financial manager when making a financial decision. The combination of capital and borrowing is called the investment approach. The core purpose of a corporate manager is to keep the capital structure at an optimal level while lowering the expense of investment and increasing the business's value. The business management chooses in what way expenses happened for completing the various operations of the firm, i.e., borrowing cost ratio, under

operating cash flows decision. The financial manager must strike a balance between revenue and expenses in this case.

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The growth of the business's market worth is implied by the operating cash flow strategy. The next key decision made by the financial manager is operating capital management. The firm's investment in cash flow is referred to as working capital. Financial managers must make significant decisions about capital management because inappropriate and insufficient expenditure can affect a company's profitability.

Since 1970, Bangladesh has had a thriving microfinance industry. The microfinance activities have progressed steadily since they began with the installation of a program in Bangladesh's Chittagong district's "Jobra" hamlet. Following that, starting in 1990, the country saw a massive increase in microfinance activities, attracting the attention of contributors, emerging associates, and legislators worldwide. In late 1990, the Bangladeshi government established the "Palli Karma-Sahayak Foundation (PKSF)". PKSF's English termed Rural Activities Support Foundation. It is working for substantial financial growth in the field of microcredit and to lend funds received from contributor states (Hasan & Ahmed, 2009; Samer, Majid, Rizal, Muhammad, Halim, and Rashid, 2015; and Agbola, Acupan, and Mahmood, 2017). Bangladesh has been a leader in the microcredit movement, demonstrating to the rest of the globe that the impoverished are creditworthy and capable of repaying their debts. As a result, microfinance has reached a significant proportion of individuals worldwide. MFIs have risen to prominence as the primary financial organizations for the deprived people who lack contact with official financial organizations. Microfinance institutions are well-targeted, with the primary purpose of reducing poverty in society over time. Microcredit and microenterprise loans totaled 1,201.91 billion BDT in 2017-18, increasing 14.91 per hundred from the earlier year. The overall number of debtors has risen to 25.40 million, with females representing 93 percent of them. 15.88 percent of Bangladesh's population lives there (www.mra.gov.bd, 19/03/2021).

From a socioeconomic standpoint, many academics have described the good and important consequences of microfinance. Microfinance institutions, in particular, are geared toward assisting disadvantaged people in improving their financial circumstances. As a result, financial management decisions affecting MFI profitability in Bangladesh should deserve special attention. Therefore, the emphasis of this study is to examine the link between financial actions and microfinance institution profitability. The following is a representation of the research: Part 1 comprises an introduction, Part 2 of a literature review of relevant studies, Part 3 reveals the objectives of the research, Part 4 of the research approach, Part 5 of the study's output analysis, and discussions. The conclusion is presented in Part 6.

2. Literature Review

Parvin, Hossain, Mohiuddin, & Cao, (2020) evaluated the financing structure, economic performance, and sustainability of microfinance institutes Bangladesh. The financing structure of an organization has a noteworthy impact on its success. Microfinance institutions'(MFIs) sources of finances, as well as their productivity and economic sustainability, have come to be a hot issue for MFIs and poverty reduction programs working to accomplish the United Nations' Sustainable Development Goals. The research explores the connection between microfinance institutions' financial structure and monetary success, as well as meeting the program's goals of

reaching out to worthy clients without security. The relationship between financial structure and the wealth of MFIs is considered using a sample of 187 MFIs. The panel data estimation method of analysis used the Random effect and Fixed effect techniques. Return on Asset (ROA) and Net Income Expenditure (NIE) have been measured to assess business success. According to the study, business success is influenced by the equity to asset ratio (EAR), risk, debt to loan ratio (DTL), and size. Moreover, whereas EAR and DTL have a favorable influence on ROA, Risk has an adverse influence. The results of this research will help microfinance institutions build overall financial leverage by allowing them to create a portfolio of funding sources from business sources of money, allowing them to optimize their economic health and reach out to necessary individuals without any need for security.

Godswill, Ailemen, Osabohien, Chisom, & Pascal, (2018) examined that working capital management is critical for the banking sector's success in Nigeria, particularly given the present condition of the sector, which has been hit hard by the global drop in oil prices, resulting in non-working credits, weakening of financial asset quality, and staff layoffs, among other things. One of the reasons why a bank's working capital management is so important to its profitability is because of this. In Nigeria, ten banks were chosen to collect data for the study. The study used the panel regression method for empirical analysis. Cash flow management has a considerable influence on the effectiveness of the particular financial institutions, according to the findings, and return on assets is a superior degree of bank effectiveness.

S. Mittal, M. Mittal, and Lavina. (2018) analyzed the influence of economic management decisions, including funding, dividends, and operating cash flows on the performance of 20 steelmakers during ten years from 2007 to 2016. The current ratio, debt to equity ratio, leverage ratio, creditors turnover ratio, and dividend as a proportion of revenues after-tax are all determinants of economic managerial decisions. Steel firms' performance has been calculated using return on assets. A panel data estimation model was used to examine the results. The current ratio, debt to equity ratio, leverage ratio, creditors turnover ratio are all important predictors of steel companies' revenue, but the amount of dividends as a percentage of earnings after taxes is not.

Profit-driven loans from private sources, according to Deb, J. (2018), can become more effective at accomplishing societal goals than cash from the community or taxpayer sources. MFIs' funding structures can also be divided into two categories: liability finance and equity funding. For MFIs, authorities want to determine the best combination of debt and equity financing. Based on the source of funds, each investment has its own set of costs that add to the rate charged when making the loan. MFIs gather funds from a variety of sources to develop an optimal fund mix that lowers overall costs. Commercial funding is now again required for the continued expansion of microfinance services.

Fersi and Boujeelbene, (2016) assessed the dynamic performance of Islamic and Conventional microfinance institutions. They employed a panel data set spanning the years 1996 to 2012, as well as the simple linear regression approach. Profitability ratios have been used to measure profitability. They concluded that Conventional microfinance institutions had a good association with financial performance and target groups for microfinance. They also observed a link between the financial results of IMFIs on their capital requirements.

Takeh and Navaprabha, (2015) looked at the consequence of wealth structure judgments on the economic success of the India's steelmakers' sector in their research. According to the analysis, wealth structure and economic success have a considerable negative association.

Hasbi (2015) looked into the financial structure, growth, profit, and worth of Indonesian institutions. Financial structure, profit, and growth all have a favorable impact on the value of institutions, according to the research. Financially sound microfinance institutions also hired more people and made more money, according to the research.

Sharma, Sharma, &Arif, (2015) studied the affiliation between profitability and operating cash flow management at the Steelmaker Authority of India Limited. According to the findings, there is a considerable connection between cash flow management and profitability. Working capital ratios are inversely associated with profitability measures, while the cash ratio, solvent ratios, creditors' turnover ratios, and stock turnover ratiosare positively related.

Cash flow management and profitability in a sample of Indian industrial enterprises were studied by Singhania, Sharma, &Rohit, (2014). The cash conversion cycle, as well as gross operating profit, was used as indicators of firms' cash flow and profitability. The data demonstrate an adverse link between the cash conversion time and profitability. Furthermore, according to the study, senior management can boost the business' productivity by dropping the periods' receivables and raising the total of periods' payable.

Chisti, Ali, & Sangmi, (2013) used a sample of Indian publicly traded companies to consider the influence of investment management on performance. In a sampling of businesses, the results show a substantial correlation between investment management and financial performance. Moreover, revenue is inversely related to the overall debt, suggesting that growing debt diminishes revenue.

Oladipupo, & Okafor, (2013) assessed that financial management is critical to a corporation's financial performance, which is necessary for it to pay dividends to its shareholders. This research looks at how a company's financial management affects the profitability and share payment ratio. The analysis examines the impact of financial management (as defined by the gross trade cycle, current portion, and debt portion) on profit and dividend payout ratio. Financial information involving twelve industrial enterprises listed on the Nigerian Stock Exchange was collected over just five years (2002 to 2006). Using both Correlation analysis and the regression analysis square (Ordinary least squares) analysis methodologies, they identified that a smaller net trade phase and a reduced debt ratio encourage higher firm performance. Although debt has an undesirable consequence of (on) business performance, it indicates that financial management has a non-significant contribution. The income and net trade phase had a positive effect on dividends, but income growth had a detrimental effect.

Thapa (2007) assessed the long-term viability and governance of South Asian financial institutions. He looked at the viability and governance of MFIs in various parts of the globe and developed recommendations for Southeast Asia. In 2005, 101 Financial institutions from India, Pakistan, Bangladesh, Cambodia, and the Philippines responded to the mix market webpage. Profitability,

income, expense, output, and portfolio worth have all been examined by institution type, which includes banks, NBFCs, non-profits, and rural banks. Southeast Asian MFIs achieves sound in terms of economic growth because they receive maximum earnings on assets and capital, covering far greater costs of revenues so much from their investment; however, in spite of having one of the minimum cost structures in the globe, this research discovered that South Asian microfinance institutions earn adverse earnings on assets and capital. Cambodia and the Philippines have demonstrated a high-yield approach, whilst Bangladesh and India have chosen a minimum-cost, minimum-yield approach. The research also discovered that NGOs had the more cost advantage. The study found that an MFI's long-term viability necessitates not just economic soundness but a perfect goal and an enterprise that is open, effective, and well-liked by all shareholders.

The Study's Hypotheses

To achieve the specified objective, the relevant hypotheses were formulated based on the review of literature:

H01: The natural log of outstanding loans has no bearing on the profitability of microfinance institutions.

H02: The borrowing cost ratio has no bearing on the profitability of microfinance institutions.

H03: Operating cost to total income ratio has no bearing on the profitability of microfinance institutions.

H04: Operating self-sufficiency ratio has no bearing on the profitability of microfinance institutions.

H05: Capital fund to loan outstanding ratio has no bearing on the profitability of microfinance institutions.

3. Objective of the Research

The purpose of this study is to look at how financial management decisions, such as financial decisions, capital management, and operating cash flow decisions, affect the profitability of a few selected microfinance institutions.

Conceptual Framework Construction

The most commonly employed variables in the field of relationship, financial management are the natural log of the outstanding loan, borrowing cost ratio, operating cost to total income, operating self-sufficiency, and capital fund to loan outstanding ratio. Based on the foregoing evaluation of literature, a conceptual research model was created to investigate the relationship between all of these characteristics and the profitability of MFIs.



Figure 1: The Author's Researcher Model

4. Research Methodology

Sampling Design

Microfinance institutions (MFIs) in Bangladesh are the target population. The top twelve microfinance institutions in Bangladesh have been identified by the researcher. BRAC, ASA, BURO Bangladesh, TMSS, Society for Social Service (SSS), Jagorani Chakra Foundation, Sajida Foundation, Padakkhep Manabik Unnayan Kendra, United Development Initiatives for Programmed Actions (UDDIPAN), Shakti Foundation for Disadvantaged Women, Christian Service Society (CSS), RDRS Bangladesh are among the microfinance institutions that were chosen for the study. The MFIs were chosen using the purposive sampling technique, which is a better way to choose samples. Purposive sampling allows the researchers to extract a range of data from the acquired data. This permits researchers to determine the substantial effect of the results on the population.

Data Collection Methods and Research Tools

The current analysis relies solely on secondary data. The study's data were collected for four years, from 2014 to 2018. The information was gathered from the microfinance regulatory authorities (www.mra.com). Based on market capitalization, a sample of the top 12 microfinance institutions was selected for this study. The South Texas Art Therapy Association (STATA), version 16, inferential analysis approach (Panel regression analysis) was employed in this study. The hypothesis for defining essential characteristics of financial management decisions affecting the profitability of microfinance institutions in Bangladesh is proven in this study using panel regression analysis.

The research looks at how financial managing judgments affect the profitability of specific microfinance institutions. The natural log of the outstanding loan, borrowing cost ratio, operating cost to total income, operating self-sufficiency, and capital fund to loan outstanding ratio were employed as independent variables, where as the return on assets, an outcome variable, was used as a predictor of profitability. The data were analyzed using the panel data analysis method. The equation for the model is as follows:

 $Y \!=\! \alpha \!+ \beta_1 \, x_1 \!+\! \beta_2 \, x_2 \!+\! \beta_3 \, x_3 \!+\! \beta_4 \, x_4 \!+\! \beta_5 \, x_5 \!+\! \epsilon_{it}.$

Where,

Y=Return on assets

 x_1 = Natural log of outstanding loan

 x_2 = Borrowing cost ratio

 x_3 = Operating cost to total income

 x_4 = Operating self-sufficiency

 x_5 = Capital fund to loan outstanding ratio

5. Analysis and Discussion

A multi-collinearity assumption must be met using independent variables for employing a panel regression. Multicollinearity is a term that describes how closely two independent variables are related (Kennedy, 2008). To test for multicollinearity, the researcher used the pairwise correlation coefficient (Kipesha, 2013; Kiganda, 2014).

	Natural log of outstanding loan	Borrowing cost ratio	Operating cost to total income	Operating self-suffi- ciency	Capital fund to loan outstand- ing ratio
Natural log of outstanding loan	1.0000				
Borrowing cost ratio	0.0063	1.0000			
Operating cost to total income	0.2829	-0.4732	1.0000		
O p e r a t i n g self-sufficiency	-0.2947	0.1312	-0.2942	1.0000	
Capital fund to loan outstanding ratio	-0.2769	0.4528	-0.6696	-0.1648	1.0000

 Table1: Correlation matrix of independent variables

According to Table 1, the coefficient values are less than 0.80, indicating that there is no problem with multicollinearity. The characteristics that influence the profitability of selected microfinance enterprises were determined using a Panel Data Regression Model.

The Hausman Method for Associated Random Model						
Assessment summary	Chi-Sq Statistics	Chi-Sqd.f.	Prob.			
	3.86	5	0.5696			

 Table 2: Model eligibility criteria (Fixed or Random model)

Source: Data Analysis

After the outcome of the fixed effect and random effect models were produced, the Hausman Test was performed to indicate the best method. Since the prob. score is higher than 0.05 of 0.05, the Hausman Test findings reveal that the random effect regression technique is adequate for the research (see Table 2).

Variables	Regression Coefficient	Probability Value	
Natural log of outstanding loan	0.1756125	0.225	
Borrowing cost ratio	-0.1857692*	0.032	
Operating cost to total income	-0.0254028*	0.000	
Operating self-sufficiency	0.0462954*	0.000	
Capital fund to loan outstanding ratio	0.0412947*	0.003	
Adjusted R Square	0.9110 (within)		
Wald chi2	438.01		
F Sig	0.0000		
Number of observations	48		

Table 3: Random-effect panel regression results

Source: Data Processing, the asterisks * indicate that the estimations are substantial at 5%.

The random effect regression model's findings are shown in Table 3. According to Table 3, the adjusted R2 of 0.911 (within) indicates that independent variables account for approximately 91% of the variation in the dependent variable. The statistical significance of F significance is 0.0000. It exemplifies this model's physical fitness. The regression results demonstrate that borrowing cost ratio and operating cost to total income have an adverse link on the profitability of selected microfinance enterprises, whereas operating self-sufficiency and capital funds to loan outstanding ratio have a positive relationship. On the other hand, the likelihood of a natural log

of the outstanding loan, 0.225, is greater than the 0.05 significance scale. Acknowledgment of the null hypothesis (H01) demonstrates that the natural log of outstanding loans has no bearing on the profitability of choosing microfinance institutions.

The borrowing cost ratio (0.032) has a probability value that is less than the significance level of 0.05. The borrowing cost ratio has been determined to be statistically significant and has a negative influence on profit. The coefficient value is -0.1857692, which presents that a one-unit rise in the borrowing cost ratio will result in a 0.1857692 loss in practice profitability, assuming all other factors remain constant. As a result of rejecting the null hypotheses (H02) the borrowing cost ratio of borrowing costs reflects the institution's credit management and the higher the ratio, the worse the microfinance institution's profitability practice (Onuonga, 2014). With the negative coefficient of borrowing cost ratio, it has been demonstrated that with the increase of borrowing cost ratio in Bangladesh, institution managers become more attentive to practice profitability.

The operating cost to total income ratio is a crucial driver of profitability of choosing microfinance firms as a result of rejecting the null hypotheses (H03). The probability value of the operating cost to total income ratio (0.000) is less than the significance level of 0.05. It has been shown that the operating cost to total income ratio is statistically significant and has an undesirable effect on profitability. The coefficient of determination is -0.0254028, denoting that a one-unit boost in the operating cost to total income ratio will result in a 0.0254028 decrease in business profitability, providing all other factors remain constant. The operating cost to total income ratio, the less profitable it is (Samad, 2015). With the negative coefficient of operating cost to total income ratio in microfinance institutions rises, managers become more aware of profitability practices.

The probability value of operating self-sufficiency (0.000) is less than the significance level of 0.05. It has been determined that operating self-sufficiency is statistically significant and has a beneficial impact on profit. The coefficient determination is 0.0462954, indicating that a one-unit rise in the operating self-sufficiency will result in a 0.0462954 increase in actual profitability, providing all other variables remain static. The operating self-sufficiency of identifying microfinance institutions is a significant determinant of profitability as a result of rejecting the null hypotheses (H04). Effective operational capacity utilization leads to improved financial management, resulting in MFIs that are more sustainable, effective, and long-term in their operations, which can contribute to more poverty alleviation. The operating self-sufficiency (OSS) of microfinance institutions and return on assets (ROA) have a positive significant association (Remer, L., & Kattilakoski, H., 2021).

As a result of rejecting the null hypotheses, the capital fund to loan outstanding ratio is an important component of profitability for choosing microfinance organizations (H05). The capital fund to loan outstanding ratio's statistical significance (0.000) is less than the 0.05 level of significance. The capital fund to loan outstanding ratio is statistically significant and has a favorable influence on profitability. The coefficient determination is 0.0412947, which indicates that one rise in

the operating cost to total income ratio will result in a 0.0412947 increase in firm profitability, assuming all other parameters remain steady. This ratio is used to safeguard depositors from potential losses, while also promoting global financial system stability and efficiency. A financial institution must retain capital that is proportional to the nature and scope of the risks it faces, and it must be able to identify, quantify, monitor, and control these risks (Islam, M. Z. R. M. S., 2018).

6. Conclusion

The research's key goal is to see how financial management decisions affect the profitability of 12 microfinance institutions, including the natural log of outstanding loans, borrowing cost ratio, operating cost to total income, operating self-sufficiency, and capital fund to loan outstanding ratio. The following are the study's findings:

- According to the results of panel data regression, selected independent variables are responsible for approximately 91% of changes in profitability. This means that some other factors that may influence microfinance institution's profitability that should be considered.
- In addition, the analysis finds that four out of the five independent variables are significant, while the one is non-significant.
- The borrowing cost ratio, operational cost to total income, operating self-sufficiency, and capital fund to loan outstanding ratio are all major determinants of the microfinance organization's profitability, however, the natural log of outstanding loans is a non-significant factor.
- On the other hand, the findings of this study can help the executives to improve the institutional financial performance and formulate policies that would develop their overall organizational performance.

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