

THE INFLUENCE OF CAPITAL STRUCTURE ON FINANCIAL PERFORMANCE OF MICROFINANCE INSTITUTIONS

Răzvan Gabriel Hăpău*

The Bucharest University of Economic Studies, Romania

Abstract

This paper aims to investigate the influence of capital structure on the financial performance of microfinance institutions (MFIs) using a sample of 89 institutions from 35 countries using the data provided by the MIX Market platform for the year 2015.

In order to do that, the paper focus on two main objectives: the first one is to evaluate the financial performance of microfinance institutions using a synthetic measure-composite index based on principal component analysis using several financial indicators and the second one is to assess the impact of capital structure on the MFIs financial performance composite index using regression techniques, taking into account three proxies for capital structure (capital to asset ratio, debt to equity ratio, deposits to total assets) and controlling for a variety of MFI-specific variables.

The empirical results pointed out two important factors for the financial performance of MFIs: profit margin and yield on gross loan portfolio. Based on the results of the composite index, Mexico, Azerbaijan, Bolivia, Nepal, Romania, Moldova, Egypt, Armenia and Bolivia are considered to be poles of microfinance performance. In Romania, the best performances were recorded by Express Finance, while at the opposite side there are OMRO and Pro-Credit, which performed poorly.

Analysing the influence of capital structure on the financial performance of MFIs, a significant and positive impact have been highlighted by the capital to asset ratio, while for the other two proxies any influence has been refuted. Therefore, a higher ratio of capital to total assets is positively associated with a higher MFIs financial performance.

Keywords: microfinance institutions, capital structure, financial performance, principal component analysis, regression analysis

JEL Classification: G21, G32, G10, G15, C38, C40

* Corresponding author, **Răzvan Gabriel Hăpău** – razvan.hapau@yahoo.ro

Introduction

Microfinance institutions (MFIs) are considered an effective tool in poverty alleviation by improving access to financial services to the unbanked poor that are widely ignored by commercial banks and other lending institutions. The exclusion mainly happens because small credits are not profitable enough for banks since their business models are not build in ways that allow for a high volume of low-value transactions. Moreover, the poor customer segment is thrown off by its inability to meet the high collateral requirements that conventional lenders usually have. By easing the collateral requirements, microfinance institutions are better equipped to target the worse off individuals and households or groups that need financing for their farm and non-farm microenterprises.

Poverty reduction has been advertised as being the main mission for most MFIs (Armendáriz, D'Espallier, Hudon and Szafarz, 2011; Armendariz and Szafarz, 2009, 2011), one of the most important reasons for which this sector has benefited (and still continues to benefit) since its expansion in the 1980s of millions in subsidies (Armendáriz și Morduch, 2005) emanating from international organizations, charitable foundations, aid agencies, and governments. Cull, Demirgüç-Kunt and Morduch (2007, 2009a, 2009b) and Morduch (1999, 2000, 2005) revealed that the Grameen Bank, first institution of this kind founded by microcredit pioneer Dr. Muhammad Yunus, was only able to grow thanks to the help of subsidies that totalled up to \$175 million between 1985 and 1996. In 2004, CGAP estimated that this sector received yearly between \$800 million and \$1 billion in donor contributions. CGAP (2011) reported that in 2009 commitment to microfinance was \$21.3 billion, only this number reflects both private and public donations and investments (with no amount solely for donations).

The paper aims to investigate the impact of the capital structure on the financial performance of microfinance institutions using a sample of 89 institutions from 35 countries in 2015 using the regression analysis. The paper is structured in three distinct sections. Thus, the second section of the paper entitled "Review of Scientific Literature" presents general considerations regarding the relation between the capital structure and the performance of the microfinance institutions taking into account the most relevant studies in the literature. At the same time, within this section, the issue of microfinance institutions was addressed analysing the phenomenon of microfinance in Romania and highlighting the most important institutions at local level.

The next section was dedicated to the description of the data and also to the main methodological aspects which aim both at quantifying the MFIs financial performance based on a synthetic performance indicator - the composite index - obtained on the basis of principal components as well as at assessing the impact of the capital structure on the composite index of financial performance using the regression analysis. The section of Results and Discussion presents the most important empirical results. The paper ends with the most important conclusions, followed by the relevant bibliography and annexes.

1. Review of the scientific literature

The topic of capital structure was extensively debated in the literature, mentioning the studies of Modigliani and Miller (1958, 1963), which represented a theoretical pillar for future research on this issue.

The most important studies underlying the development of new theories on capital structure are the studies of Modigliani and Miller (1963), Stiglitz (1972), Titman (1984), Jensen and Meckling (1976), Myers (1977), Miller) and Myers and Majluf (1984). One of the conclusions that can be highlighted in these studies is that the sector and also the type of industry represents a determinant of the capital structure.

Identifying the determinants of the capital structure is a highly discussed topic in the literature. In his study, Bradley et al. (1984) demonstrated on a sample of 851 companies using average values for a period of 20 years that the leverage was negatively correlated with volatility, and the intensity of R & D and other advertising expenditures are negatively correlated with the leverage. The deductibility of expenses has been positively correlated; the sector in which the firm is active has also been found to be a very important factor in choosing the structure.

Using a sample of 469 firms, Titman and Wessels (1988) proved that testing eight independent variables to determine the capital structure: taxation, growth, product uniqueness, asset structure, industry classification, volatility, size, and profitability that the profitability and uniqueness of the product were statistically significant and negatively correlated with the leverage.

In their study, Rajan and Zingales (1995) highlighted the determinants of choosing the capital structure by analysing financing decisions of firms in the main developed countries, using four determinants of the capital structure and four proxies for leverage, profitability, size of enterprises, the structure of fixed assets and growth opportunities, they studied debt in different countries on a total sample of 4,557 non-financial firms between 1987-1991.

The empirical results revealed that Anglo-Saxon countries have a small leverage compared to the continental-European countries (France, Germany, and Italy) and Japan, considered as priority-oriented economies to the banking system.

Daskalakis and Psillaki (2008) aimed to investigate the determinants of the capital structure in enterprises in France, Greece, Portugal and Italy, empirical results pointing out that the leverage is positively correlated with the size of the company. The asset structure is negatively correlated with the leverage. Therefore, firms that maintain a large part of the tangible assets of total assets tend to use less debt. Profitability is also negatively correlated with leverage, while the risk and leverage are negatively correlated, which means that the higher the risk of the company, the lower the leverage ratio.

Glen and Ajit Singh (2004) analysed for 8,000 companies listed in 22 emerging countries and 22 developed countries for the period 1994-2000 aiming to investigate and explain the differences in the capital structure in the two markets: Emerging Markets (EM) and Developed Markets (DM). The main results showed that in terms of size of the company there is no significant difference in the distribution of EM and DM firms in the selected samples. The study also pointed out that EM firms hold more fixed assets than their counterparts in developed markets.

Kyereboah-Coleman (2007) examined the impact of the capital structure on the performance of microfinance institutions using panel analysis for the period 1995-2004 using random and fixed-effects models, proving the fact that most institutions have a high leverage and they financed their long-term operations over short-term debt. Microfinance institutions with a very high share also have better performance, attracting more customers,

enjoying economies of scale and therefore they are more able to cope with moral hazard and adverse selection, increasing their ability to deal with the risks

Mwangi, Muathe and Kosimbei (2014) analysed the relationship between capital structure and the performance of non-financial companies listed on the Kenya stock exchange using a sample of 42 companies highlighting that financial leverage has had a significant negative impact on financial performance measured by ROA and ROE.

Nivorozhkin (2004) studied the determinants of capital structure and leverage in five countries selected to join the EU (Poland, Bulgaria, the Czech Republic, Romania and Estonia) and in the EU countries between 1997 and 2001. On average, the leverage of companies in transition countries remained lower than in EU countries. The lowest average leverage values recorded in that period were in Bulgaria and Romania (average rates of 12% and 19%, respectively). The article highlighted the fact that the determinants of the capital structure vary according to the country. The only variables that had a constant leverage effect on all countries were the company's profitability and age. The theory of hierarchy is thus supported by the fact that more and more profitable companies tend to borrow less. The size of the company is statistically significant and positively correlated with the leverage in Romania.

Dragota (2005) aimed at identifying the main aspects of the financing policy that was applied at the company level that carry out their activity in the economic environment in Romania. Companies from the Bucharest Stock Exchange were used in the analysis for the period 1997-2003, pointing out that the main financial resources are in the equity of the Romanian companies.

Although in the literature the determinants of capital have been extensively studied, studies that effectively treat the relationship of capital structure with performance are quite few. It is worth noting here the study by Berger and Udell (2006) which reveals that the higher the leverage effect, the greater the efficiency.

Abor (2005) showed that the short-term debt ratio is positively correlated with return on equity. Yat Hung et al. (2002) analysed the relationship between the capital structure and property profitability in the construction sector in Hong Kong, concluding that high engagement is positively related to the asset and negatively associated with profit margins.

The importance of this theme lies in its very utility to reduce poverty in developing countries, which is a necessity in the elaboration of specific policies, and thus the necessity of this kind of empirical study.

In terms of microfinance activity in Romania, it started more than fifteen years ago when the first microfinance institution launched its program for the financing of micro, small and medium enterprises in Romania. In recent years, the sector has evolved rapidly. It has become more efficient and more productive in fulfilling its mission of providing support and services to entrepreneurs who have not benefited from such support. Romania joined the European Union on 1 January 2007, which led to an increase in the micro-enterprises sector. At present, it is estimated that the uncovered demand for microcredits is around EUR 700 million.

Romania is one of the few European countries with a specific legal framework for the microfinance sector. The Law no. 240/2005, adopted by the Romanian Parliament in July 2005, establishes a favourable framework for the development of microfinance institutions.

Government decree no. 28, which entered into force in January 2006, sets out the conditions that banks have to comply with in order to grant loans.

Under the control of the Central Bank of Romania, the MFIs are registered and authorized to operate with a minimum capital of 200.000 Euros. It is estimated that since 1995, the number of aided companies has exceeded 100.000 and more than 150.000 jobs have been created. One of the main tax changes recently approved by the Government is the income tax on micro-enterprises. Companies with revenues up to € 65.000 will automatically pay the 3% income tax instead of the normal profit tax.

One of the oldest microfinance institutions is PATRIA CREDIT (formerly Capa Finance), set up in 1996, with dozens of agencies across the country, targeting in particular rural households, small farms and micro-enterprises. Currently, its status changes so it becomes a microfinance bank.

In Romania, the first microfinance companies appeared in Oradea (Romcom Foundation) and Târgu Mureş (Izvor Association, currently Opportunity Micro Credit Romania) in 1992-1993. These organizations emerged in the context of the start of the development of the small business sector that needed, in addition to financial support, specific training and advice.

More than thirty MFIs operate in Romania today. The average loan amount is about 7.500 euros, with a maximum of 25.000 Euros (this amount being determined by the law in 2005) and a minimum of 670 Euros.

Also commonly referred to as bankruptcy for the poor, classical microfinance is a very simple approach that has proved effective in helping poor people around the world to improve their situation. People living in poverty need a diversified range of financial services for their businesses. Microfinance gives them access to basic financial services such as credit, money transfer services, savings accounts, micro-insurance, etc.

According to Opportunity Microcredit, an MFI is an organization - a credit union, a commercial bank, a financial NGO or a credit co-operative - which provides financial services to the poor. The main features of microfinance are: relatively small loans as a value, the target of which is addressed to low-income households, a relatively short repayment period and frequent reimbursements.

2. Data and research methodology

The data on MFIs was extracted from the annual accounting statements provided by MIX (Microfinance Information Exchange) Market, a global web-based microfinance platform encompassing financial and social performance measurements of over 1,700 microfinance institutions.

The analysis of the impact of the capital structure on the financial performance of the MFIs was carried out at the level of 35 countries for the last year of the database, 2015, taking into account a number of 89 microfinance institutions.

Analysing the data set, 89.9% of MFIs are mature and only 10.1% of them are young, most of MFIs were from Latin America and the Caribbean (nearly 56%), 25% of them from Eastern Europe and Central Asia, and only 3.37% are active in East and Pacific Asia, most

of whom were from Peru and Bolivia, and from Romania five institutions were considered in the analysis: Express Finance, LAM, OMRO, Patria Credit and ProCedit Bank-ROM. Also, most MFIs were non-bank institutions (42.7%), while most of them (72%) were regulated.

In order to investigate the impact of capital size on the financial performance of institutions, the study aims to build a synthetic indicator that will reveal the financial performance of microfinance institutions based on five financial indicators using the principal component analysis (ACP): return on assets (ROA)(Cull et al., 2007), which reflects organization's ability to use its assets productively, return on equity(ROE) (D'Espallier et al., 2013) which measures the returns produced for the shareholders, operational self-sustainability(OSS)(D'Espallier et al., 2013), profit margin(Tchakoute-Tchuigoua, 2010; Tucker and Miles, 2004), portfolio yield (Janda and Turbat, 2013).

A microfinance institution is profitable and sustainable if it has a positive return on assets and equity and an operational self-sufficiency of over 100%. High values of these three financial indicators reflect institutions that are becoming more efficient (Bassem, 2012). Tucker and Miles (2004) found that independent financial (self-financing) MFIs perform better on ROA and ROE than those that did not achieve this feature. Moreover, it also means that the MFI has managed to have a positive net income, disregarding donor support to compensate for potential operational losses. Larger values of these three accounting measures refer to more efficient institutions (Bassem, 2012).

In order to build the synthetic financial performance indicator, the principal component analysis has been applied, which involves the reduction of a large number of indicators into a few ones-principal components-who represent linear combinations of the original variables, uncorrelated and who will recover much of the variance of original variables. The selection of the optimal number of components is based on the Kaiser Criteria, selecting only the eigenvalues greater than 1.

In order to be able to interpret the main components in terms of the original indicators, the Varimax technique was applied implying that the main component is strongly correlated with some of the original variables and weakly correlated with the others.

A detailed description of the methodology for building composite indices is presented in the studies of Nardo et al. (2005), OECD (2008), Davidescu et al. (2015) and Abdi and Williams (2010).

The composite index will be determined using as weights the proportion of variance recovered by each component in total variance recovered by all principal components and then this index will be transformed to take values between 0 and 100, stating that 100 is the best performing and 0 is the worst.

Based on the values of this index, it will be possible to assess the financial performance of institutions at the level of 2015, a value of 50 representing an average performance.

After building the composite index of financial performance, the impact of the capital structure will be assessed on the basis of three proxy variables using the regression analysis in which the dependent variable is the composite financial performance index, and the independent variables refer to the capital structure (capital to asset ratio, debt to equity ratio and deposits to total assets) (Ismail and Possumah, 2012) and also a variety of MFI-specific variables: the age quantified by number of years since establishment, (Bassem, 2012), the

size of the institution (measured as the log of total assets) (Hermes et al. 2013) and a series of dummy variables: if the institution is an NGO or a bank, if regulated, if it is a non-profit institution (D'Espallier et al., 2011), whether it is active in Romania, or whether it comes from Latin America or Africa (Bogan, 2008). The size of the firm is a key factor in determining the company's capital structure.

The general form of the model is:

$$perf_i = \beta_0 + \beta_1 \cdot Structura_Capitalului_i + \beta_2 \cdot variabile\ dummy_i + \varepsilon_i \quad (1)$$

where:

$perf_i$ is the MFI financial performance index i , $Structura_Capitalului_i$ are the variables of the capital structure, and the dummy variables all detailed above. Models were estimated using the least squares method (MCMMP).

Starting from the results of literature studies, the following hypotheses will be tested:

- The capital structure (total debt/equity ratio) significantly influences the financial performance of institutions;
- The capital structure (capital/asset ratio) significantly influences the financial performance of the institutions;
- The capital structure (deposit/asset ratio) significantly influences the financial performance of the institutions.

The debt / equity ratio measures the overall leverage effect of the institution. Traditionally, MFIs type NGOs have a low ratio of debt/equity because their ability to obtain commercial debt is limited. Most MFIs have less leverage than commercial banks. The financial health of a company is also reflected by its leverage. This is determined as the ratio between total debts and total assets. It shows to what extent the business of the company relies on borrowed money. In general, a debt ratio of less than 60% is considered to be very good and reflects a long-term balance between internal and external sources of funding. A decrease in the level of this indicator reflects a strengthening of the short, medium and long term self-financing capacity. An upper level of 50% can trigger an alarm for the company's creditors.

The capital assets ratio determines whether a company has enough capital. A regulatory financial body may use the ratio of capital to assets to set a minimum level of capital that banks need to have.

SPSS version 18 software was used to build the composite index, while the regression analysis was performed using the Eviews 7 software.

3. Results and discussion

3.1. Assessing the financial performance of microfinance institutions at the level of the year 2015

The empirical results of principal component analysis (table no.1) highlighted the existence of two principal components who recover almost 82% of total variance of original variables. In order to make easier the interpretation of each principal component in terms of

original variables, Varimax technique has been applied (Davidescu et. al. 2015). Analysing the correlation coefficients from rotated component matrix, the first principal component has high positive coefficients (loadings) with profit margin (0.966) and ROA (0.915 can be defined in terms of profit margin. The second principal component is mainly dominated by portfolio yield (0.995).

Table no.1 The empirical results of principal component analysis

Component	Initial Eigenvalues			Total Variance Explained			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.097	61.941	61.941	3.097	61.941	61.941	3.074	61.485	61.485
2	1.007	20.134	82.075	1.007	20.134	82.075	1.029	20.590	82.075
3	.630	12.608	94.683						
4	.236	4.724	99.408						
5	.030	.592	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix^a

	Component	
	1	2
Zscore(Returnonassets) Return on assets	.915	.090
Zscore(Returnonequity) Return on equity	.698	-.033
Zscore(Operationalselfsufficiency) Operational self sufficiency	.902	-.141
Zscore(Profitmargin) Profit margin	.966	-.104
Zscore(Yieldongrossportfolioreal) Yield on gross portfolio (real)	-.050	.995

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Source: Own calculation in Eviews

The graphical representation in the space of both principal components (fig.no.1) pointed out a relatively homogenous group of microfinance institutions having a similar behaviour in relation to the new indicators but also five distinct classes of MFIs. The distribution of those institutions by country of original revealed the following:

Class 1: Includes Mexican microfinance institutions with a lower score on the first component ("profit margin") and a good score on the second component ("portfolio yield").

Class 2: Includes microfinance institutions from Azerbaijan and Bolivia that have relatively poor scores on both components.

Class 3: Includes Mexican microfinance institutions with good scores on both components.

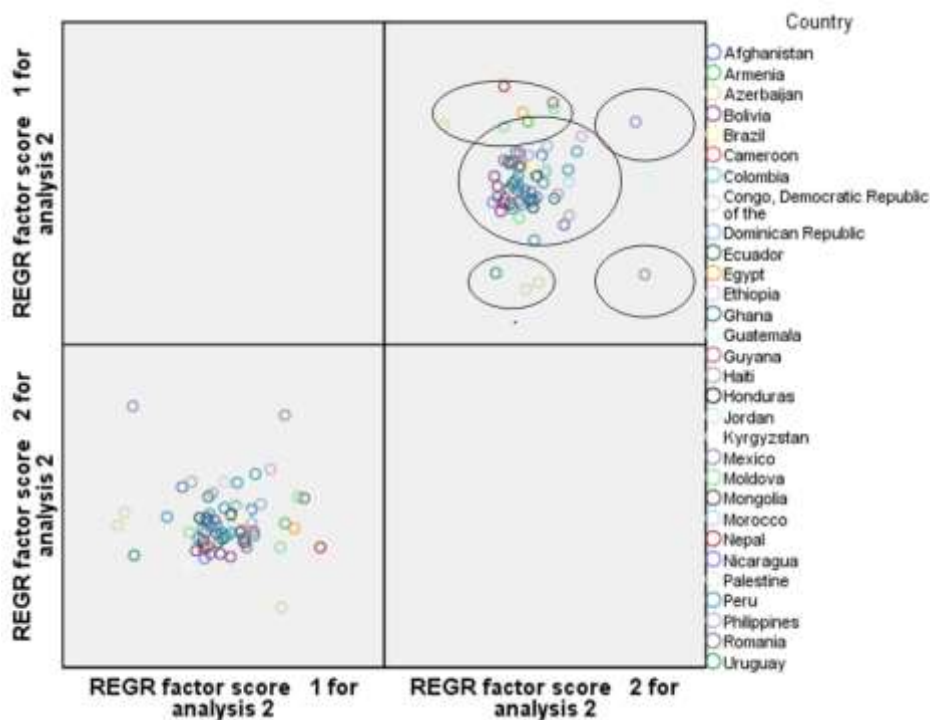


Figure no.1. The distribution of microfinance institutions at country level in the space of the two main components

Source: Own calculation in Eviews

Class 4: Includes microfinance institutions from **Azerbaijan, Nepal, Romania, Moldova, Egypt, Armenia and Bolivia** with a low score on the first component and a better score on the second component.

Class 5: Includes the rest of microfinance institutions with average scores on both components.

It is worth to note that two of the microfinance institutions in Romania, Express Finance and LAM, ranked in the 4th grade with good performance on the portfolio yield, while the other 4 institutions belonged to the middle performance class.

The quality of the empirical results of the PCA analysis was evaluated using the Bartlett sphericity test and Kaiser-Meyer-Olkin (KMO) statistic which measures the adequacy of the sample of financial performance indicators in the construction of a synthetic indicator, showing a satisfactory analysis as the test was statistically significant and the KMO statistics has a value greater than 0.5 (0.648) (table no.2).

Table no.2. The results of KMO statistics and Bartlett test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.648
Bartlett's Test of Sphericity	Approx. Chi-Square	315.086
	df	10
	Sig.	.000

Source: Own calculation in Eviews

The index of financial performance was build using the weights of each principal component in the total variance and furthermore it was rescaled to take values between 0 and 100:

$$finan_perf_index = \frac{61.94}{82.07} \cdot PC1 + \frac{20.13}{82.07} \cdot PC2 \quad (2)$$

At the same time, the financial performance index has been transformed into a non-numeric variable that can take three categories: we have weak performance institutions if the index measures values up to 50, medium performance institutions if the index measures between 50 and 75 and institutions with good performance if the index exceeds the threshold of 75.

Analysing the performances of the Romanian MFIs, it is clear that among the five microfinance institutions, the best performances were recorded by Express Finance, medium performance were recorded by LAM and Patria Credit, while OMRO and Pro-Credit recorded poor performance (fig.no.2).

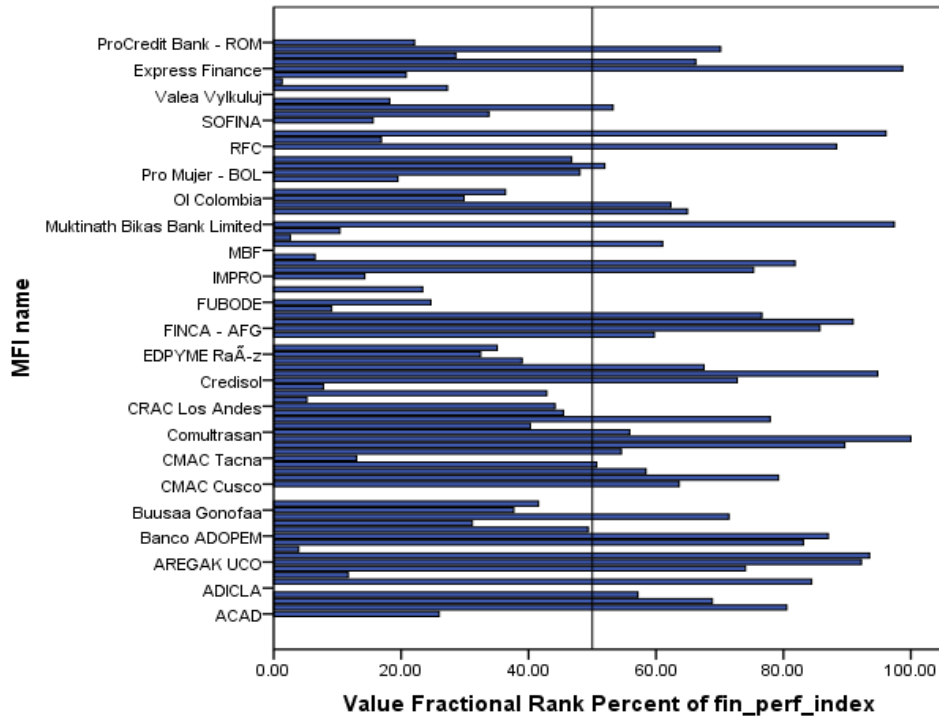


Figure no.2. The Distribution of MFIs' Institutions by Financial Performance

Source: Own calculation in Eviews

3.2. Evaluating the impact of capital structure on the financial performances of microfinance institutions

In order to assess the influence of the capital structure on the financial performance of microfinance institutions, three regression models for each proxy variable of the capital structure were estimated, incorporating also auxiliary control variables.

The empirical results (table no. 3) pointed out that only one of the three variables of the capital structure showed a statistically significant impact on the financial performance of the MFIs. Thus, the capital/asset ratio has a positive and statistically significant impact at the significance level of 1%, so the higher the share of the capital in assets, the higher the financial performance.

However, the debt/equity ratio and the deposit/asset ratio do not have a significant impact on the financial performance of the institutions.

In the first model that proved to be the optimal model, the financial performance of microfinance institutions is significantly influenced by the size of the institution, the capital/asset ratio, and also by the membership of the institution in Romania. There has been no significant impact on the fact that the institution is a bank or NGO or is non-profit.

Tale no. 3. The empirical results of regression analysis

<i>The dependent variable: Composite index of MFIs financial performance</i>			
	Model I	Model II	Model III
Intercept	-104.18**	-31.605	-35.141
Capital to asset ratio	0.978*		
Debt to equity ratio		-1.064***	
Deposits to total assets			-0.093
RO_dummy	110.94*	80.153***	81.051
African_dummy	11.495	5.279	14.639
Asian_dummy	46.854*	16.174	25.240
Latin_America_dummy	-1.423	-7.421	-2.980
Log_assests	6.381*	4.603***	4.524
Bank_dummy	4.385	2.538	4.003
NGO_dummy	12.504	24.050**	15.867
Non-profit_dummy	-6.260	-14.212	-7.615
Reg_dummy	18.026**	12.178	7.994
Standard Error of the model	23.91	29.10	29.73
R ²	0.412	0.129	0.094
R ² adj.	0.323	0.004	0.053
F-test(Prob)	4.62* (0.00)	0.973 (0.475)	0.640 (0.774)

Note: * means that the coefficient is statistically significant at the level of 1%, ** at the level of 5% and *** at the 10% level.

Source: Own calculation in Eviews

The first model is statistically valid because the probability of the Fisher test is lower than 5%. The degree of determination in the model is 41.2%, which means that the simultaneous influence of the variables explained 41.2% of the variation in the MFIs financial performance of the institutions.

The hypotheses concerning the residuals of the model were tested using the Durbin-Watson statistic (non-autocorrelation hypothesis), the White test, the Jarque-Bera statistic, and the VIF criterion. The empirical results highlighted the fulfilment of the assumptions, with the exception of the residuals' normality.

In the second model, the leverage, the membership of MFI in Romania and the size of the company, significantly influenced the financial performance of the company. However, the model proved not to be statistically valid because it was invalidated by the Fisher test results (the likelihood was higher than 10%). In addition, the degree of determination was very low, only 12.9%, which confirms the above.

The last model showed the influence of deposit /assets on the financial performance of the company by pointing out that the deposit/asset ratio does not significantly affect the MFIs

performance (the probability was greater than 10%). Within this model, none of the included variables showed a significant impact. In addition, the model did not proved to be statistically valid, the probability of the Fisher test being greater than 10%). In addition, the degree of determination was very low, only 9%, which confirms the above.

Therefore, the only variable reflecting the capital structure with a significant and positive impact on the financial performance of microfinance institutions is the capital to asset ratio. The other two variables, debt to equity ratio and the deposit / asset ratio did not showed a significant statistical impact on the financial performance of microfinance institutions.

Conclusions

The paper aims to investigate the influence of the capital structure on the financial performance of microfinance institutions using a sample of 89 microfinance institutions from 35 countries at the level of 2015 using the regression analysis.

Therefore, the financial performance of microfinance institutions was assessed using a synthetic measure- a composite index determined by the results of principal component analysis.

The empirical results revealed the existence of two main components recovering approximately 82.07% of the variance of the original variables - the profit margin and the Yield on gross loan portfolio.

The Classification of companies by country of origin according to these two indicators highlighted the following poles in terms of MFIs performances: Mexico, Azerbaijan, Bolivia, Nepal, Romania, Moldova, Egypt, Armenia and Bolivia. Analysing the performance of Romanian MFIs, it is important to notice that best performances were recorded by Express Finance, while a medium performance has been achieved by LAM and Patria Credit. At the opposite side, OMRO and Pro-Credit performed poorly.

Further, using the composite index of the microfinance institutions performance, the impact of the capital structure was quantified using three variables (debt / equity ratio, capital / asset ratio and deposit / asset ratio) based on the regression analysis.

The empirical results pointed out that only one of the three proxy variables of the capital structure show a statistically significant impact on the financial performance of the MFIs. Thus, the capital to asset ratio exhibited a positive and statistically significant impact, as the higher the share of the capital in assets, the higher the financial performance. However, the equity ratio and the deposit / asset ratio do not manifest a significant impact on the financial performance of the microfinance institutions.

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Annex A. Variables' description

Variabila	Observații	Studii din literatura
Age	Years of operation of the MFI	Bassem (2012)
Size	Measured by taking natural logarithm of total assets (all net asset accounts)	Hermes et al. (2013)
Dummy NGO	1, if the MFI is a NGO, 0 otherwise	D'Espallier et al. (2011)
Dummy bank	1, if the MFI is a bank, 0 otherwise	D'Espallier et al. (2011)
Dummy regulated	1, if MFI is regulated, 0 otherwise	D'Espallier et al. (2011)
Non-Profit Dummy	1, if MFI is a non-profit organization, 0 otherwise	Bogan (2008)
Latin America Dummy	1, if MFI is from Latin America of Caraibe and 0 otherwise	Bogan (2008)
African Dummy	1, if MFI is from Africa and 0 otherwise	Bogan (2008)
Romanian dummy	1, if MFI is from Romania and 0 otherwise	Bogan (2008)
Indicators of MFIs performance		
ROA - the rate of return on assets	Expresses the efficiency of using the assets of the company in the operational activity, ie the degree of profitability of the entire capital invested in the company.	Cull et al. (2007)
ROE - Financial Return Rate	effects the efficiency of using the capital invested by shareholders.	D'Espallier et al. (2013)
Yield on gross loan portfolio	Indicates the ability of the Gross Loan Portfolio to generate financial income from interest, fees and commissions. (Microfinance Consensus Guidelines,	Janda & Turbat (2013)

	CGAP, The World Bank Group, September 2003).	
Profit margin	Measures the remaining percentage of operating income after all financial provisions, credit losses and operating expenses are paid (Microfinance Consensus Guidelines, CGAP, The World Bank Group, September 2003).	Tchakoute-Tchuigoua (2010), Tucker and Miles (2004)
<i>OSS (Operational Self-Sufficiency)</i>	It measures how well an MFI covers its costs through operating revenues. In addition to operating expenses, it is recommended that financial charges and credit losses to be included in this calculation as they are a normal (and significant) cost of operation (Microfinance Consensus Guidelines, CGAP, The World Bank Group, September 2003).	D'Espallier et al. (2013)
Indicators of capital structure		
Deposits / assets ratio		Ismail and Possumah (2012)
Debt to equity ratio		Ismail and Possumah (2012)
Capital to assets ratio		Ismail and Possumah (2012)