Int. J. Manag. Bus. Res., 5 (1), 9-18, Winter 2015


# Performance Analysis of Banks and Microfinance Institutions in India

*[1] K. Pal Narwal, [2] S. Pathneja, [3]* M. Kumar Yadav*

*[1,2,3] Guru Jambheshwar University of Science and Technology, Hisar, Haryana, India*

Received 27 December 2013, Accepted 9 June 2014

**ABSTRACT:**
Present paper intends to measure the determinants of performance of Indian financial sector. The performance variables of banking sector and microfinance institutions in India are studied over a study period of six years i.e. 2006-07 to 2011-12. The financial sector of India is gaining strength over the years and its contribution to growth is overwhelming. Banks are considered the main component of Indian Financial Sector. Indian banking sector is providing new and improved financial services to economy and masses over the years. The banks have achieved the above objective in some areas but failed to reach to other areas. To fill this gap of access Microfinance Institutions were established in India. The main objective of MFIs is to reach to masses to which banks are not able to provide the services. The main intention of establishing MFIs was to fill the gap of access to financial services by poor people. So, overall the mixed results are obtained from the study. The performance rotates around mainly two variables i.e. size and spread to total assets. All other variables are either negative or insignificant or both to the performance of banks and microfinance institutions.

**Keywords:** *Performance, Banks, MFIs, India*

## INTRODUCTION

The performance of an economy is very much associated with the performance of the financial sector of that economy. Financial sector constitute a very important part in any economy. The financial sector of India is gaining strength over the years and its contribution to growth is overwhelming. Banks are considered the main component of Indian Financial Sector. A good performance of banking sector itself indicates the overall good performance of the sector, which ultimately leads to improved performance of economy.

The main purpose of banking sector is to appropriately manage the inflow, outflow of funds within the economy, and reach the masses to increase their access to services of financial sector. The banks have achieved the above objective somehow in some areas but failed to reach to other areas. To fill this gap of access Microfinance Institutions were established in India. The main objective of MFIs is to reach to masses to which banks are not able to provide the services.

Meeting the gap between demand and supply of credit in the formal financial institutions frontier has been challenging (Vichore and Deshpande, 2012). So, the government of emerging economies take an action to reduce the gap between demand and supply of credit by Microfinance institutions till they provide microcredit to the poor people. MFIs mission is to provide financial services to low-income households. In emerging countries, MFIs also offer loans and technical assistance on how to start and develop a business (Hartungi, 2007). Microfinance is an effective tool that may be

***Corresponding Author, Email:** *manojyadav453@gmail.com*

helpful in reducing poverty and spread economic opportunity by giving poor people access to financial services, such as credit and insurance.

The banking sector has envisaged tremendous growth overtimes and gets a completely different and advanced look in present times. International access, increased no. of banks, improved technology like e-banking, m-banking and t-banking itself tells the changing story of Indian banking sector and to fill the gap of access within the country MFIs are enhancing the strength of Indian banks. So, Banks and MFIs together constitute very important role to maintain and enhance the progress of economy as a whole.

Present paper is an attempt to analyze the performance of banks and MFIs over the years. Yet, banks are much older than MFIs but the purpose is not only to highlight the strong aspects of banks or MFIs but to find out how to improve and co-integrate the two to achieve the ultimate target of economy's growth. 28 public and private sector banks and 28 Microfinance institutions are analyzed over a period of six years i.e. 2006-07 to 2011-12 to achieve the objectives of the present study. The present paper is an initiative to together bring both banks and MFIs in the research limelight.

## Literature Review

There exists a vast literature on the performance analysis of Banks and Microfinance Institutions around the World. Yet, no specific study in India is witnessed in the literature that simultaneously analyzes the performance of both. Therefore, present paper is a new milestone to the existing literature in that sense. The review is presented as follows:

Zeitun and Benjelloun (2013) measured the relative efficiency of Jordanian banks over the period of 2005-10. DEA was used on twelve banks and only a few banks were found to be efficient. The significant effect of financial crisis was observed on the performance of banks during the study period.

Vichore and Deshpande (2012) analyzed the performance and growth of MFIs in terms of cost efficiency, cash constraints and net portfolio in India providing microfinance services to low income clients. The study was an exploratory study. It suggested that proper training should be provided to the employees of MFI's especially in disbursing loans and collection of the loan amount so that the cost per borrower could be managed efficiently.

Rai and Rai (2012) studied about the factor affecting financial sustainability of microfinance institution. To find the factors affecting financial sustainability a Multiple Linear Regression analysis was used and found that the capital/ asset ratio, operating expenses/loan portfolio and portfolio at risk> 30 days were the main factors, which affect the sustainability of microfinance institutions. Jha and Hui (2012) made a comparison of financial performance of banks in Nepal. The results of multivariate regression revealed that return on assets was significantly influenced by capital adequacy ratio, interest expenses to total loan and net interest margin, while capital adequacy ratio had considerable effect on return on equity.

Abbas et al. (2012) conducted a study on Pakistani banks to evaluate their financial performance over the study period. Return on Operating Fixed Assets was used to evaluate the performance and it was found that high total assets, high total operating fixed assets and high equity were no equivalent to better performance of banks. Mehta (2012) examined the financial performance of UAE banks after and before the crisis period. The study covered the period from 2005 to 2010 and observed that the performance of banks was badly affected by the crisis. The crisis had mainly affected the performance of ROA and ROE as all the profitability ratios had declined after crisis.

Ananda and Colaco (2012) overviewed the performance and prospectus and described how microfinance was effective and financial viable method of addressing sustainable rural development through provision of microcredit to rural poor for productive activities. Micro-credit had assumed a special significance in the context of increased emphasis on poverty alleviation, women empowerment and rural development in India.

Suberu et al. (2011) study accessed the impact of microfinance institutions on small scale enterprises in Nigeria. The research was descriptive in nature and a survey method was employed. Found that positive contribution of microfinance institutions loan towards promoting small scale enterprises market share, production efficiency and competitiveness and

govt. policies and programmed designed to develop small scale enterprises in Nigeria were ineffective and thereby need to be reconceptualized. Sufian (2011) explored the sources of inefficiency of Korean banks. Three different approaches of Data Envelopment Analysis were employed over a period of twelve years. The results indicated a high level of technical efficiency under operating approach than value added and intermediation approach. The results also suggested that the reason of decline in efficiency were mainly due to scale efficiency.

Kamau (2011) aimed to study the efficiency and productivity of banks in Kenya. Data Envelopment analysis and MPI (Malmquist Productivity Index) were applied to the performance indicators. The results showed well performance of the banks over the study period. Hoque et al. (2011) paper examined the impact of commercialization on capital structure, mission and performance of MFIs. Robust estimation techniques ranging from simple OLS to fixed and random effects, Tobit and two-stage least-squares regression were applied using panel data and found that increase use of commercial debt and equity financing lowers productivity for client-maximizing MFIs through lower conversion of savers to borrowers or the yield rate.

Roy (2011) examined the delivery process and profitability of MFIs. Delivery mechanism was explained in terms of four parameters namely collateral requirement, size of the loan amount, repayment time and purpose of the microfinance loan. Profitability was analyzed ROA and ROE. This study adopted simple correlation and descriptive analysis technique and found that MFIs of Assam were enjoying higher profitability.

Coleman and Oesi (2008) tried to evaluate how governance indicator impact on performance measure of profitability of MFIs. They measured profitability by only ROA. They found that governance plays a critical role in the performance of MFIs and that the independence of the board and a clear separation of the positions of a CEO and board chairperson have a positive correlation with both performance measures. Kosmidou (2008) studied the determinants of banks profitability in Greece banks. A significant and positive relation of size and capital adequacy was observed during the study period of the study.

Coleman (2007) study examined the impact of capital structure on the performance of MFIs. For this purpose fixed, random effect technique and Hausman specification test was used and found that most of the MFIs used long-term debt and employ high leverage. These MFIs perform better by reaching out to more clientele, enjoy scale economies, and therefore better able to deal with moral hazard and adverse selection, enhancing their ability to deal with risk.

Satta (2006) study showed the performance evaluation of small firms financing schemes with a view to assessing their potential for improving small firms' access to finance. It measured financial performance in terms of net loans to total assets, non-financial investment to total assets, written of loans, ROA. Miller and Noulas (1997) observed a negative relation of size on the profitability of US banks over a period of 1985 to 1990. The reason for the negative relation was diseconomies of scale.

## RESEARCH METHOD

### Research Objectives

Different types of banks and microfinance institutions are presently working in India. At present, different kind of banks like public sector banks, private sector banks, foreign banks and development banks are operating efficiently in the country. The purpose of different kind of banks is to provide services to masses, also to create competitive environment within the country, and to successfully compete at global level. Different kind of MFIs like Non-Banking Financial Institutions (NBFI) and Non-Govt. Organizations (NGO) are also working to provide different kind of financial assistance to poor people.

The present paper aims to examine the performance analysis of banks and microfinance institutions in India. In this paper, explanatory variables, profitability indicators and capital structure are analyzed for a period of six years i.e. from 2006-07 to 2011-12. Correlation and Ordinary Least Square (OLS) regressions have been carried out on panel data to check the impact of explanatory variables on the profitability and capital structure performance of Indian Banks and MFIs.

Data collection: Data is taken for 28 MFIs and Banks. Data have been taken from the MIX market, RBI and official website of MFIs and banks.

**Variable Measurement**

A brief explanation of the variable and formulae used for calculation is given next.

Return on assets (ROA): It measures the profitability of the MFIs and banks and calculated as

ROA = Operating income/Total assets

Return on Equity (ROE): It measures a company's profitability; by revealing how much profit a company generates; with the money shareholders have invested

ROE = Net income/Average net worth

Capital Asset ratio (CAR): Capital asset ratio is the ratio which determines the bank's capacity to meet the time liabilities and other risks such as credit risk, operational risk etc.

CAR = Total equity/ Total assets

Spread on Assets (STA): Spread to total asset is the ratio, which measure operating efficiency of financial institutions.

STA = Spread/Total Assets

Operating expenses to Assets ratio (OPER): Operating expenses to assets ratio is measure the efficiency of financial institutions.

OPER = Operating expenses/Assets

Physical Capacity (PC): It measures the physical intensity of the companies i.e. how much fixed assets are there in proportion to total assets. It is calculated as:

PC = Fixed assets/Total assets

Debt Equity ratio (DER): It is the proxy used for the leverage of the companies. It indicates what proportion of equity and debt that the company is using to finance its assets:

DER = Total debt/Total equity.

Natural log (Total Assets): It is employed as the proxy for the size of the firm:

Firm size= Log (Total Assets)

**Tools of Analysis**

In carrying out the analysis, the basic panel data regression equation is employed:

$$Y_{it} = \alpha + \beta X / + \varepsilon_{it},\ i = 1\ldots N;\ t = 1\ldots T \qquad (1)$$

Where, i denote the individual microfinance institutions or banks and t denote the time. In this case, i represent the cross-section identifier and t the time identifier. α is a scalar, β is a K-dimensional vector and $X_{it}$ is the $it_{th}$ observation on the K explanatory variables. In estimating a panel data model, most applications make use of a one-way error component model for the disturbances, with

$$\varepsilon_{it} = \mu_i + v_{it} \qquad (2)$$

Where, $\mu_i$ denotes the unobservable individual specific effect and $v_{it}$ denotes the remainder disturbance. $\mu_i$ is time invariant and essentially accounts for any unobserved effect that is not captured in the specification. $v_{it}$ on the other hand varies with both the cross-sectional variables and time and could even be considered as the usual disturbance in the regression.

Model specification

Since the data is of panel nature consisting of both time series and cross sectional data, Ordinary Least Square (OLS) regressions are used for the purpose of analysis

An attempt is made to estimate the following specific regression models:

$$DER_{it} = \alpha_0 + \beta_1 \ln SIZE_{it} + \beta_2 CAR_{it} + \beta_3 PC_{it} + \beta_4 STA_{it} + \beta_5 OPER_{it} + \varepsilon_{it} \qquad (3)$$

$$ROA_{it} = \alpha 0 + \beta_1 DER_{it} + \beta_2 CAR_{it} + \beta 3 PC_{it} + \beta_4 STA_{it} + \beta_5 OPER_{it} + \beta 6 \ln SIZE_{it} + \varepsilon_{it} \qquad (4)$$

$$ROE_{it} = \alpha 0 + \beta_1 DER_{it} + \beta_2 CAR_{it} + \beta 3 PC_{it} + \beta_4 STA_{it} + \beta_5 OPER_{it} + \beta 6 \ln SIZE_{it} + \varepsilon_{it} \qquad (5)$$

### Hypothesis

$H_{01}$. All the explanatory variables have same effect on the profitability of Banks and MFIs.

$H_{02}$. All the explanatory variables have same effect on the capital structure of Banks and MFIs.

## RESULTS AND ANALYSIS

**Descriptive Statistics:** Tables 1 and 2 provide the results of descriptive statistics in both microfinance institutions and banks. From the results, it may be observed that microfinance institutions use more debt in compare to banks. It may be because very few microfinance institutions take deposit while banks take deposits. Operating expenses on assets are also high in microfinance institutions in comparison to banks. ROE is 0.136 in banks and 0.206 in microfinance institutions indicating that investors are getting more return on equity in microfinance institutions. It may be because investors are less in microfinance institutions in compare to banks. Capital asset ratio is 0.005 in banks and 0.069 in microfinance institutions. It may be because microfinance institutions aim to provide only credit to poor people or small industry. Therefore, microfinance institutions use more capital in compare to banks. Spread is 0.098 in microfinance institutions and 0.025 in banks indicating that interest income is also high in microfinance institutions in compare to banks.

**Table 1: Descriptive statistics of banks**

| | DER | CAR | PC | OPER | ROA | ROE | SIZE | STA |
|---|---|---|---|---|---|---|---|---|
| **Mean** | 0.800508 | 0.005140 | 0.008844 | 0.017329 | 0.018556 | 0.135782 | 13.45527 | 0.025557 |
| **Median** | 0.697952 | 0.003460 | 0.007717 | 0.015826 | 0.018713 | 0.149214 | 13.61870 | 0.024094 |
| **Maximum** | 2.364048 | 0.032591 | 0.026877 | 0.040719 | 0.032427 | 0.252706 | 16.40742 | 0.079156 |
| **Minimum** | 0.000000 | 0.000502 | 0.002177 | 0.010905 | -0.006671 | -1.305107 | 10.44813 | 0.012413 |
| **Std. Dev.** | 0.592044 | 0.005552 | 0.004446 | 0.004944 | 0.005309 | 0.125249 | 1.309071 | 0.008384 |
| **No. of Obs.** | 168 | 168 | 168 | 168 | 168 | 168 | 168 | 168 |

**Table 2: Descriptive statistics of MFIs**

| | DER | CAR | PC | OPER | ROA | ROE | SIZE | STA |
|---|---|---|---|---|---|---|---|---|
| **Men** | 15.44126 | 0.069481 | 0.019581 | 0.105113 | 0.000993 | 0.205991 | 20.82435 | 0.098876 |
| **Median** | 5.600000 | 0.146300 | 0.009109 | 0.085800 | 0.019836 | 0.132600 | 20.77208 | 0.094579 |
| **Maximum** | 621.7300 | 0.921400 | 0.382354 | 1.112600 | 0.265898 | 9.077100 | 24.47075 | 0.291022 |
| **Minimum** | -38.40000 | -15.89500 | 0.000000 | 0.007400 | -1.602666 | -13.69030 | 16.03665 | -0.096491 |
| **Std. Dev.** | 57.47689 | 1.263739 | 0.039253 | 0.126958 | 0.155850 | 1.773933 | 1.624511 | 0.052900 |
| **No. of Obs.** | 167 | 167 | 167 | 167 | 167 | 167 | 167 | 167 |

Tables 3 and 4 show the results of correlation analysis of banks and microfinance institutions respectively. Results show that ROA, ROE and DER are positively correlated with size of banks (at 1 percent significance level). In microfinance institutions ROA and ROE is positively correlated with size (at 10 and 1 percent significance level) respectively. Debt equity ratio is negatively correlated with size (at 5 percent significance level) in microfinance institutions. ROA is positively correlated with spread (at 1 percent significance level) in both microfinance institutions and banks. CAR is positively correlated with ROA (at 5 percent significance level) in MFIs and negatively correlated in banks (at 1 percent significance level).

Churchill and Iacobucci (2005) have argued, multicollinearity condition reduces the efficiency of the estimates. How much correlation causes multicollinearity, it is not clearly defined. Hair et al. (2006), (Nuredin, 2012) argue that correlation coefficient below 0.9 may not cause serious multicollinearity problem, (Pal and Soriya 2012) recommended that if the correlation between explanatory variables exceeds 0.8 then it would be a problem of multicollinearity. Here, the above results are showing correlation much below it. Therefore, there is no presence of multicollinearity among the variables.

**Table 3: Correlation matrix of banks**

| | ROA | ROE | SIZE | STA | PC | DER | OPER | CAR |
|---|---|---|---|---|---|---|---|---|
| ROA | 1.000000 | | | | | | | |
| ROE | 0.373893* | 1.000000 | | | | | | |
| SIZE | 0.340075* | 0.266402* | 1.000000 | | | | | |
| STA | 0.279723* | 0.007811 | -0.170027** | 1.000000 | | | | |
| PC | -0.307945* | -0.376716* | -0.230951* | -0.144200*** | 1.000000 | | | |
| DE | -0.043788 | -0.054891 | 0.512327* | -0.241182* | 0.098537 | 1.000000 | | |
| OPER | -0.213740* | -0.45589* | -0.30984* | 0.188387** | 0.49124* | 0.13178*** | 1.000000 | |
| CAR | -0.462685* | -0.551847* | -0.54909* | -0.026526 | 0.49416* | -0.081192 | 0.538665* | 1.000000 |

**Table 4: Correlation matrix of MFIs**

| | ROA | ROE | SIZE | STA | PC | DER | OPER | CAR |
|---|---|---|---|---|---|---|---|---|
| ROA | 1.000000 | | | | | | | |
| ROE | 0.271759* | 1.000000 | | | | | | |
| SIZE | 0.141191*** | 0.387960* | 1.000000 | | | | | |
| STA | 0.393761* | -0.132080*** | 0.002605 | 1.000000 | | | | |
| PC | -0.450000* | -0.679230* | -0.309921* | -0.047245 | 1.000000 | | | |
| DER | -0.034360 | -0.158181** | -0.168674** | -0.150649** | 0.022696 | 1.000000 | | |
| OPER | -0.550853* | -0.713819* | -0.354522* | 0.108860 | 0.754886* | 0.017546 | 1.000000 | |
| CAR | 0.178416** | -0.111379 | 0.034059 | 0.361760* | -0.000760 | -0.001976 | -0.012824 | 1.000000 |

The study applied panel data models where the random effect and fixed effect models could be used to estimate the relationships among variables and thereby taking care of the omitted variables. Results of both the models are checked through applying Hausman Specification Test (Hausman, 1978). In case where both models are found significant then Random Effect Model results are taken into consideration.

Table 5 shows the results of OLS regression results where ROE is the dependent variable and others are explanatory variables. Chi square result indicates that fixed effect model is more appropriate for both banks and microfinance institutions. Size is positively but insignificantly explaining the ROE of MFIs and negatively explaining the ROE of banks, which indicates that size matters to MFIs but not to the banks operating in India. Spread to total assets is positive for banks but not significantly and significantly negative to MFIs.

All other variables are negatively associated to ROE. Out of which OPER and CAR are significantly negative to banks and DER, OPER and PC are significantly negative to MFIs. The adjusted R-square values indicate model is fair explanatory to banks and better explanatory to MFIs.

Table 6 is explaining the association of different explanatory variables to ROA as dependent variables. To chose between fixed and random models, Hausman test results lead to accept the random effect model for both banks and MFIs. The results indicate that size and spread to total assets both are significantly and positively associated to ROA of banks. Nevertheless, in case of MFIs is spread to total assets ratio is significantly positive to ROA.

**Table: 5: Regression results of ROE as dependent variable**

| | **Banking Sector** | | **MFIs** | |
|---|---|---|---|---|
| | **Fixed Effect** | **Random Effect** | **Fixed Effect** | **Random Effect** |
| **Intercept** | 1.165958** | 0.317329** | 1.236513 | -1.239997 |
| | (2.503075) | (2.46895) | (0.410150) | (-0.989767) |
| **DER** | -0.030448 | -0.009542 | -0.004945* | -0.004242* |
| | (-1.05879) | (-0.555457) | (-2.947868) | (-2.745252) |
| **OPER** | -8.378766*** | -4.89459** | -8.263744* | -5.657274* |
| | (-1.763478) | (-2.248183) | (-4.483051) | (-5.195924) |
| **PC** | -3.613273 | -1.951090 | -14.25100* | -15.26726* |
| | (-0.988662) | (-0.884154) | (-3.086279) | (-4.434158) |
| **CAR** | -28.31748* | -9.651685* | -0.043621 | -0.122690*** |
| | (-4.28389) | (-4.720274) | (-0.525563) | (-1.661429) |
| **Size** | -0.051273 | -0.001897 | 0.041928 | 0.130769** |
| | (-1.56668) | (-0.214686) | (0.291530) | (2.261121) |
| **STR** | 0.265873 | 0.128870 | -6.842589* | 3.130821*** |
| | (0.177829) | (0.123242) | (-3.032186) | (-1.709721) |
| **Adjusted R-Squared** | 0.340806 | 0.323238 | 0.607430 | 0.594075 |
| **F-Statistic** | 3.616355* | 14.29388* | 8.783458* | 41.49041* |
| **Hausman Test** | $\chi^{2}$ (6) | 11.628687*** | $\chi^{2}$ (6) | 19.684859* |

Note: *, **, *** represent significance at 1%, 5% and 10% level. The Hausman test is used to check the suitability of Fixed and Random Models. Value of t-statistics is shown in parenthesis.

DER is significantly negative to ROA of banks and OPER is significantly negative to ROA of MFIs and remaining variables are insignificantly negative to both banks and MFIs. Adjusted R-square is fair enough in case of MFIs (0.4939) but not so good in case of banks (0.1287) which make it a more explanatory model for MFIs than Banks.

Regression results of DER (Debt Equity Ratio) as dependent and other variables as independent are shown in table 7.

**Table: 6: Regression results of ROA as dependent variables**

| | Banking Sector Fixed Effect | Random Effect | MFIs Fixed Effect | Random Effect |
|---|---|---|---|---|
| **Intercept** | 0.007621<br>(0.548637) | 0.003707<br>(0.420503) | 0.334636<br>(1.127663) | 0.097477<br>(0.741210) |
| **DER** | -0.001202<br>(-1.401925) | -0.001378***<br>(-1.891228) | 0.0000722<br>(0.437360 | 0.0000937<br>(0.608816) |
| **OPER** | -0.148850<br>(-1.050577) | -0.083121<br>(-0.711611) | -0.786160*<br>(-4.332816) | -0.821863*<br>(-7.307950) |
| **PC** | -0.043429<br>(-0.398492) | -0.037402<br>(-0.380862) | -0.106799<br>(-0.234973) | 0.199165<br>(0.570116) |
| **CAR** | -0.132656<br>(-0.672979) | -0.206456<br>(-1.557262) | -0.002814<br>(-0.344490) | -0.000121<br>(-0.016366) |
| **Size** | 0.000906<br>(0.928009) | 0.001132***<br>(1.862450) | -0.019733<br>(-1.393876) | -0.007469<br>(-1.226490) |
| **STR** | 0.131341*<br>(2.945904) | 0.138829*<br>(3.287403) | 1.629129*<br>(7.334212) | 1.417121*<br>(7.691798) |
| **Adjusted R-Squared**<br>**F-Statistic** | 0.673708<br>11.44882* | 0.128747<br>5.112986* | 0.507223<br>6.177766* | 0.493968<br>28.00713* |
| **Hausman Test** | $\chi^2(6)$ | 3.71278 | $\chi^2(6)$ | 3.496226 |

Note: *, **, *** represent significance at 1%, 5% and 10% level. The Hausman test is used to check the suitability of Fixed and Random Models. Value of t-statistics is shown in parenthesis.

**Table: 7: Regression results of DER as dependent variables**

| | Fixed Effect | Random Effect | Fixed Effect | Random Effect |
|---|---|---|---|---|
| **Intercept** | -7.265205*<br>(-5.830772) | -4.776683*<br>(-6.148697) | 277.5552***<br>(1.809540) | 169.6494*<br>(2.681789) |
| **OPER** | 16.78154<br>(1.186280) | 34.46025*<br>(3.07378) | -16.68015<br>(-0.175744) | 5.339686<br>(0.095048) |
| **PC** | -3.054232<br>(-0.279311) | -10.13872<br>(-1.043624) | -65.31431<br>(-0.274759) | -74.72331<br>(-0.421137) |
| **CAR** | -33.25947***<br>(-1.699055) | 1.081884<br>(0.084159) | 1.239076<br>(0.289996) | 3.132905<br>(0.825098) |
| **Size** | 0.605423*<br>(7.299732) | 0.395721*<br>(7.734106) | -11.91095***<br>(-1.624016) | -6.450884**<br>(-2.192693) |
| **STR** | -6.77920<br>(-1.528078) | -10.18899*<br>(-2.459234) | -112.5647<br>(-0.972066) | -194.0692**<br>(-2.084234) |
| **Adjusted R-Squared** | 0.735744 | 0.315371 | 0.008391 | 0.027135 |
| **F-Statistic** | 15.53012* | 16.38558 | 1.043894 | 1.926016*** |
| **Hausman Test** | $\chi^2(5)$ | 34.731848* | $\chi^2(5)$ | 1.775156 |

Note: *, **, *** represent significance at 1%, 5% and 10% level. The Hausman test is used to check the suitability of Fixed and Random Models. Value of t-statistics is shown in parenthesis.

Fixed model results for banks and random model results for MFIs are applied on the basis of Hausman test results. In case of banks, size is positively explaining the DER, which means there is difference in the capital structure of large and small banks. R-square is fairly strong (0.7357) which insists to accept the model as explanatory model for banks. Physical Capacity and OPER are insignificantly negative to DER of banks.

OPER and CAR are positive but insignificant associated to DER of MFIs. Size and STR are significantly negative to DER which indicate that structure of capital is same for large of small MFIs. The R-square value is quite low in case of MFIs, which indicates that model is not adequately explaining the DER of MFIs. Physical Capacity is insignificantly negative to DER of MFIs.

## DISCUSSION

The present study aims to examine the performance of banks and microfinance institutions in India over the period of six years i.e. 2006-07 to 2011-12. The study is differently contributing to the literature, as there are no studies found in the studied literature, which simultaneously study the banks and microfinance institutions of India. Three performance indicators ROE, ROA and DER are taken as dependent variables and OPER, PC, CAR, Size and Spread to total assets are taken as explanatory variables.

The results are different for banks and microfinance institutions. Size matters to MFIs and spread matters to Indian banks performance for ROE. Whereas, size and spread both matters to ROA of banks and spread is explaining the performance of microfinance institutions. Size is positively and significantly associated to DER of banks, whereas, size and spread both are significantly negative to DER of microfinance institutions. Therefore, we reject the null hypothesis for profitability and capital structure because some explanatory variables have positive effect on Banks but they have negative impact on MFIs.

So, overall the mixed results are obtained from the analysis. The performance seems to have rotated around mainly two variables i.e. size and spread to total assets. All other variables are either negative or insignificant or both to the performance of banks and microfinance institutions.

## CONCLUSION

The present study reveals the different performance determinants of Indian banks and microfinance institutions. The study can be of major interest to analyst, policy makers and researchers. As MFIs are in developing stage in India, the study may be helpful in the computation of future policy formation for the growth and development.

Different aspects of efficiency can become part of future studies. Different performance model like CAMEl, ACCION and GIRAFFE may also be used to access the different aspect of performance of banks and MFIs. Region wise performance analysis can also be part of future research.

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