

Outreach and Performance Analysis of Microfinance Banks in Pakistan

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Abstract

This paper investigates the outreach, performance, and a trade-off between both outreach & performance of microfinance banks in Pakistan. The sample consists of five scheduled microfinance banks and data ranging from 2008 to 2014, collected from the Mix Market international database. Using 13 ratios of outreach and 32 ratios of performance, this study used difference of mean test which compares mean values of these ratios against the South Asian benchmarks. The results indicate that the microfinance banks in Pakistan, as compared to the South Asian microfinance institutions, are facing a risky situation because of the poor performance with a low growth in the outreach. Further, results also established that there is no trade-off between outreach and performance. This study suggests that a proper corporate structure and devoted skillful management can play a vital role in making best strategies and policies to solve the problems being faced by the Pakistani microfinance banks.

Keywords: Microfinance banks, outreach, performance, ratio analysis, emerging economies.

JEL Classification: G21 O16

1. Introduction

A microfinance institution is an organization that offers financial services to low-income population, including the self-employed. Micro financial services generally include savings and credit; however, some microfinance organizations also provide insurance and payment services. But to achieve these financial and social goals i.e. provision of financial services to poor, needy and low-income population, microfinance institutions need to remain efficient and sustainable in the long run. Some microfinance institutions such as Grameen Bank in Bangladesh and Khushhali Bank Limited in Pakistan have successful stories of superior performance and outreach growth, but some others suffer from low efficiency and sustainability problems.

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Historically, microfinance institutions (MFIs) in Pakistan were being sponsored by donors, presently, there is reduced donors support and lack of financing to MFIs especially for microfinance banks (MFB). Main funding sources of Microfinance providers in Pakistan include (1) Subsidized funding to non-regulated MFIs from Pakistan Poverty Alleviation Fund (PPAF)⁴ (2) Deposits mobilization (only MFBs because non-bank micro finance providers (MFPs) are prohibited by the central bank from mobilizing deposits in Pakistan) (3) Commercial funds mainly from the risk-averse commercial banks (SBP's Microfinance Credit Guarantee Facility (MCGF) provides guarantee to the commercial banks in order to motivate them for providing loans to MFPs) (4) Debt from commercial banks, capital markets, and specialized microfinance investments (MIVs) (5) Equity capital (shares) and (6) Traditional donors' funding.

The objective of this study is to investigate the outreach and performance of Microfinance banks in Pakistan and compare them with South Asian benchmark. This study also investigates whether microfinance banks face a trade-off between outreach and performance or not. Previous studies on outreach and performance analysis of microfinance industry in Pakistan have limited scope. Rauf and Mahmood (2009) used six dimensions of outreach and few efficiency and productivity ratios to analyze the performance of microfinance sector during 2004-2007. This study is more comprehensive and different from the previous studies as we used longer dataset i.e. from 2008 to 2014 for five microfinance banks (MFBs) and used a comprehensive set of financial ratios to analyze them. Particularly this study has the following contributions. Firstly, previous studies employed fewer ratios-based outreach & performance analysis whereas we investigated the outreach and performance analysis of MFBs by employing 45 ratios i.e. 13 ratios of outreach and 32 ratios of performance. Secondly, to compare the performance of Pakistani MFIs against South Asian benchmark (weighted average) we used difference of mean test approach whereas previously studies were using either descriptive statistics or selective ratios and results were not compared with any benchmark (e.g. Rauf & Mahmood, 2009). The mean test approach was first used by Agarwal and Sinha (2010) in India and then by Shu and Oney (2014) in Cameroon. Thirdly, this study also investigated the existence of trade-off between outreach and performance. Fourthly, using Pakistan as a case study, this study contributes towards literature of microfinance banks & institutions in developing and emerging economies.

The remaining paper is organized as follows. Section 2 briefly describes the history of microfinance in Pakistan. Section 3 presents the summary of previous studies on MFI performance and outreach. Section 4 describes methodology and data source, section 5 presents the results and discussion and section 6 concludes the study.

4 An autonomous not-for-profit Govt. organization established in 2000.

2. Literature Review

Microfinance sector in Pakistan is trying to serve the poorest people while keep struggling to maintain itself sustainable and self-sufficient. Rauf and Mahmood (2009) used six dimensions of outreach and some efficiency and productivity ratios and found that an extensive growth strategy badly affected the growth and performance of the sector. The study also indicated a trade-off by mentioning that the focus of the sector started to shift from social goals to sustainability and financial goals. The shift was caused by the increasing expenses due to extensive growth. Ghalib (2013) analyzed microfinance institutions in the Punjab province of Pakistan and concluded a lower depth of outreach (serving poorest of the poor) because of the high operating expenses. High operating expenses made MFIs shift their mission from social goals to financial goals (financial sustainability). The shifting of mission pointed towards a trade-off between social goals and financial goals. Another study by Quayes (2012) suggested as the depth of outreach increases, the financial sustainability decreases, and vice versa. This negative relationship between depth of outreach and financial sustainability highlights a trade-off between these two in case of low-disclosure MFIs.

Lensink et al. (2011) concluded that outreach is negatively related to efficiency. The negative relationship points towards a trade-off between outreach and efficiency. Hermes and Lensink (2011) reviewed previous papers about microfinance impact on poverty reduction, and outreach versus sustainability. He concluded that substantial number of previous papers are supporting the point that microfinance has a positive role in reducing poverty and that there is a trade-off between outreach and sustainability. Paxton (2002) figured out that microfinance institutions especially NGOs must face sustainability issues when they try to increase their depth of outreach (serving poorest of the poor). Serving the poorest people happens to be costlier that is why MFIs must increase their dependency on subsidies to cover the high expenses incurred. The inverse relationship points towards a trade-off between outreach and sustainability. Another study by Olivares-Polanco (2005) investigating 28 Latin American microfinance institutions proved a trade-off between depth of outreach and sustainability. The greater they serve poorest of the poor clienteles, higher the operational expenses they face which subsequently affects sustainability. Piot-Lepetit and Nzongang (2014) analyzed village banks in Cameroon and confirmed that 15 % of the village banks faced a trade-off between outreach and financial sustainability whereas 46 percent do not face any such trade-off. Annim (2012) having analyzed 164 microfinance institutions concluded a trade-off between outreach and financial sustainability. The outreach was a proof of MFIs facing challenges to meet financial and social goals.

Shu and Oney (2014) used the difference of mean test approach and concluded

that the microfinance institutions in Cameroon were highly exposed to the default risk due to a low-cost strategy and there was a trade-off between outreach and performance. Bassem (2012) conducted a unique study and concluded that initially there was a positive relationship between financial performance and depth of outreach, but a trade-off occurred when MFIs tried to improve their portfolio at risk. Im and Sun (2015) located a trade-off between profitability and outreach having investigated 1129 MFIs across 98 countries. They concluded that MFIs had to sacrifice profitability when they tried to prefer social goals (serving the poorest). Cull et al. (2007) showed that increasing outreach to the poorest clients causes high expenses which affects profitability thus indicating a trade-off between the two. According to Abate et al. (2014) a trade-off between outreach to the poor and cost-efficiency shows that MFIs are facing difficulties in achieving financial sustainability goals and social goals.

Tchakoute-Tchuigoua (2010) found that transforming non-profit microfinance organizations into private and regulated MFIs show better performance than NGOs in terms of portfolio quality. Hoque et al. (2011) revealed the results that leverage reduces access to the poor and has an adverse impact on the performance. He showed that an increase in the commercial debt and equity financing reduces productivity, and a decrease in the yield rate reduces Operational Self-Sufficiency (OSS). Hasan et al. (2009) described that Bangladesh Unemployment Rehabilitation Organization (BURO) improved its outreach and sustainability from 2001 to 2005 but a failure occurred from 2006 to 2007. They showed that microfinance institutions should emphasize on financial efficiency and decrease dependency on subsidies.

Gohar and Batoool (2015) found that outreach and productivity of MFIs increases but their economic performance decreases due to large size of the boards. Female directors cause improvement in outreach level but have nothing to do with economic performance. CEO/chairman duality characteristic of the boards has a negative impact on performance, outreach, and productivity whereas firm size, experience, regulating MFIs, and non-profit activities in lending lead towards improvements in the above characteristics of MFIs. Assefa et al. (2013) concluded that the competition between the microfinance institutions has increased during the last ten years and was negatively related with the outreach and repayment of loans performance of MFIs.

Kyereboah-Coleman and Osei (2008) used a panel data estimation methodology and proved that board size played a role in putting positive impact on profitability and negative impact on outreach. The board's independence increases the profitability and outreach. Two-tier board structure (separate positions of CEO and board chairman) leads towards effective performance of MFIs. CEOs tenure, board competence, MFI size and age as a measure of reputation sometimes target outreach and sometimes target profitability. Another analysis by Kyereboah-Coleman (2007) of panel data through a

panel data regression with the framework of “fixed and random-effects techniques”, gave the results that most MFIs are highly leveraged, performing better by having access to more clients, lessening default rates and taking benefits from scale economies.

Kereta (2007) analyzed the primary and secondary data of MFIs in Ethiopia and revealed that industry’s outreach increased during 2003-2007. MFIs were operationally sustainable in terms of ROA, ROE ratios and the industry’s performance in terms of profit was improving over time. Dependency ratio and NPLs ratios provided the evidence that MFIs were financially sustainable. There was no evidence regarding the trade-off between outreach and financial sustainability. Quayes (2015) having analyzed 764 Microfinance institutions across 87 countries proved that there was no trade-off between outreach to the poor clients and financial performance. He successfully concluded a positive association between the two goals of MFIs. Zerai and Rani (2012) explored 85 Indian microfinance institutions and found out a weak correlation between average loan size (depth of outreach), women borrowers (outreach) and operational sustainability. The weak correlation means that there was no trade-off between outreach and financial sustainability. Fajonyomi et al. (2012) analyzed the microfinance banks’ outreach and sustainability in southwestern Nigeria and found out no trade-off between outreach and sustainability as there was positive relationship between the two. Amha (2004) investigated the microfinance institutions in Ethiopia and reported a remarkable growth in both the outreach and sustainability. Ethiopian MFIs were successful to eliminate any trade-off between outreach and sustainability thus meeting simultaneously the financial as well as social goals. Adhikary and Papachristou (2014) concluded a positive relationship between depth of outreach (percentage of women borrowers), breadth of outreach (number of active borrowers) and profitability and efficiency. The positive relationship provides a proof that there is no trade-off between outreach and profitability and efficiency. An empirical study used by Hartarska and Nadolnyak (2007) showed that the transformation of non-regulated MFIs into regulated MFIs help the MFIs to reach more borrowers by enabling them to get access to savings and MFIs with less leverage achieve better sustainability.

3. Data and Methodology

The purpose of this study is to investigate the outreach and performance of the microfinance banks in Pakistan and to investigate whether there is any trade-off between the two. Outreach indicators quantify the level of access of poor borrowers to the financial services of MFIs whereas performance indicators measure the financial structure, efficiency and sustainability of MFIs. This paper has attempted to analyze both outreach and performance of microfinance banks in Pakistan in a more detailed way which is described in the following section. The list of performance and outreach

ratios and their abbreviations (as used in the results' tables) are given in the appendix 1.

There are nine MFBs working in Pakistan. However, current study considers only five MFBs and the remaining four MFBs were excluded from the sample due to missing data. Following Agarwal and Sinha (2010); Shu and Oney (2014), this paper uses the difference of mean test approach for comparing Pakistani's MFBs with South Asian benchmark. In difference of mean test the mean value of each ratio is compared with the South Asian weighted average value (of year 2014) as a benchmark by applying one-sample t-test. The benchmark's weighted averages values were collected from the *Mix Market international database*⁵. The study period is seven years i.e. 2008 to 2014. The five microfinance banks that were investigated are Khushhali Bank Limited, Apna Microfinance Bank Ltd. (formerly known as NMFB), Pak-Oman Microfinance Bank Ltd. (POMFB), Tameer Microfinance Bank Ltd. (TMFB), and The First Micro Finance Bank Ltd. (FMFB).

4. Results and Discussion

The following section discusses the ratio analysis of Pakistani microfinance banks and their comparison with South Asian benchmark using one sample t-test for the difference of mean test.

4.1 Financial structure ratios

Table 1 shows the financial structure ratios of Pakistani MFBs and South Asian benchmark (weighted average for Year 2014). Mean Capital/Assets ratio of Pakistani MFBs is higher than South Asian MFBs' benchmark and the difference is significant at 1% level of significance. This indicates that Pakistani MFBs are more equity based than the South Asian MFBs. Equity of a microfinance bank includes shareholder equity, donated equity, and retained earnings. The mean Debt/Equity ratio is not significantly different from the South Asian benchmark. An approx. equal Debt/Equity ratio indicates that both Pakistani & South Asian MFBs depend on loans from commercial banks and subsidized sources. The mean Deposits/ GLP ratio is higher than South Asian benchmark and difference is significant at 5% level of significance. This means that Pakistani MFBs are more deposit based and depend more on deposits as a source of funds than South Asian MFBs.

There is no significant difference in Deposits/Total Assets ratio of Pakistani and South Asian MFBs. On the other hand, the mean value of South Asian benchmark for GLP/Total Assets ratio is significantly (at 10% level of significance) higher than Pakistani MFBs. This shows that the size of gross loan portfolio of Pakistani MFBs is

⁵ <https://www.themix.org>

Table 1: Financial Structure Ratios Mean Analysis

Statistics	Capital/Assets	Debt/Equity	Deposits/ GLP	Deposits/To- tal Assets	GLP/Total Assets
Mean	0.432***	3.094	1.002**	0.416	0.397***
Stand. Dev	0.318	2.894	0.737	0.307	0.167
Median	0.306	2.270	0.890	0.453	0.395
Min	0.098	0.040	0.006	0.003	0.119
Max	0.959	9.230	2.459	0.860	0.733
Count	35	35	35	35	35
South Asian Benchmark (Mean Value)	0.248	3.080	0.733	0.390	0.886

Where ***, ** and * indicates that the mean difference is significant at 1%, 5% and 10% level of significance, respectively.

smaller than South Asian MFBs. This comparative analysis of capital structure with South Asian MFIs reveals that Pakistani MFBs are relying more on equity financing than debt financing and are more deposit based than South Asian MFBs. Contrarily the size of Pakistani MFBs' gross loan portfolio (GLP) is smaller than the South Asian MFBs. The analysis of overall financial structure pointed out a less than desired situation where Pakistani MFBs are highly equity based, retaining their deposits and not converting deposits into loans. This strategy ultimately resulted in lower returns which can be confirmed by the following return ratios.

4.2 Overall financial performance ratios

The overall financial performance of MFBs can be measured through four ratios i.e. Return on Assets (ROA), Return on Equity (ROE), Financial Self-Sufficiency (FSS) and Operational Self-Sufficiency (OSS). These ratios measure profitability, sustainability and self-sufficiency of the MFBs. Since the South Asian benchmark values of Financial Self-Sufficiency (FSS) and Operational Self-Sufficiency (OSS) were not available; therefore, we only used Return on Assets (ROA) and Return on Equity ratios for analyzing overall financial performance. The results are reported in Table 2.

The mean values of both financial performance ratios i.e. ROA and ROE of Pakistani MFBs are significantly lower than South Asian benchmarks and the difference is significant at 1% level of significance. This shows that the Pakistani MFBs are not productively using their assets and equity-base thus earning less returns as compared to the South Asian MFIs. The return portion is measured as net operating income after taxes and the negative returns discloses that Pakistani MFBs are incurring huge

Table 2: Overall Financial Performance Mean Analysis

Statistics	Return on Assets (ROA)	Return on Equity (ROE)
Mean	-0.016***	-0.021***
Stand. Dev	0.060	0.175
Median	-0.003	-0.004
Min	-0.312	-0.771
Max	0.042	0.272
Count	35	35
South Asian Benchmark	0.032	0.176

Where ***, ** and * indicates that the mean difference is significant at 1%, 5% and 10% level of significance, respectively.

expenses and this can be confirmed by the following expense ratios.

4.3 Revenues ratios

In Table 3, mean value of all three ratios i.e. financial revenue/average total assets (FR/ATA) ratio, yield on gross loan portfolio (nominal) ratio and yield on gross loan portfolio (real) ratio is higher than South Asian benchmark and the difference is significant at 1% level of significance. This shows that Pakistani MFBs are earning more revenues as compared to the South Asian MFBs, but these revenues are consumed by the huge expenses thus higher revenues could not be translated into profitability.

Table 3: Revenue Mean Analysis

Statistics	FR/A	Yield on GLP (nominal)	Yield on GLP (real)
Mean	0.179***	0.328***	0.168***
Stand. Dev.	0.052	0.094	0.106
Median	0.181	0.321	0.16
Min	-0.028	0.186	-0.014
Max	0.264	0.807	0.683
Count	35	35	35
South Asian Benchmark	0.142	0.158	0.063

Where ***, ** and * indicates that the mean difference is significant at 1%, 5% and 10% level of significance, respectively.

4.4 Expense ratios

Microfinance institutions incur diverse kinds of expenses such as financial expenses, provision for loan impairment, operating expenses, personnel expenses, and administrative expenses. All these expenses affect the financial performance of MFBs.

Table 4: Expenses Mean Analysis

Statistics	TE/ATA	FE/ATA	PLI/ATA	OE/ATA	PE/ATA	AE/ATA
Mean	0.196***	0.038*	0.013**	0.145***	0.080***	0.064***
Stand. Dev	0.035	0.026	0.013	0.033	0.021	0.013
Kurtosis	2.909	1.737	4.888	3.601	2.597	3.616
Min	0.132	-0.001	-0.004	0.094	0.048	0.046
Max	0.284	0.081	0.057	0.239	0.133	0.106
Count	35	35	35	35	35	35
South Asian Benchmark	0.106	0.047	0.008	0.055	0.038	0.017

Where ***, ** and * indicates that the mean difference is significant at 1%, 5% and 10% level of significance, respectively.

Ratio analysis in Table 4 indicates that mean value of all expense ratios of Pakistani MFBs are significantly higher than South Asian benchmark except for Financial Expense/Average Total Assets (FE/ATA) ratio. The FE/ATA ratio of South Asian MFBs is slightly higher and the difference is significant at 10% level of significance. This suggest the reliance of South Asian MFIs more on non-equity financing sources. Provision is an amount which is set aside by the banks to cover potential losses originating from bad loans. If loans are not returned by borrowers, this provision becomes an expense for the banks and it eventually affects profitability. The mean value for this ratio is greater than the South Asian benchmark which means that the Pakistani MFBs are facing a risky situation in covering the provision for loan impairment expenses as compared to the South Asian MFBs.

A brief look at these expense ratios reveals that except for FE/ATA ratio, the different expenses incurred by Pakistani MFBs are twice or higher than South Asian MFBs. This is the main reason for negative returns of Pakistani MFBs reported in Table 2.

4.5 Efficiency ratios

Efficiency means to produce optimal outputs from the minimal inputs. Table 5 contains the results of mean analysis of efficiency ratios.

A look at Table 5 reveals that the Pakistani MFBs are significantly less efficient than South Asian MFIs (a smaller ratio is better). All mean differences are significant at 1% level of significance. Pakistani MFBs are unable to cover operating, personnel, salary, cost per borrower and cost per loan expenses due to inefficient management of Gross loan portfolio. The huge expenses incurred show the inability of Pakistani

Table 5: Efficiency Mean Analysis

Statistics	OE/ALP	PE/ALP	AS/GNI pc	CPB	CPL
Mean	0.422***	0.237***	4.370***	98.587***	107.379***
Stand. Dev	0.226	0.141	1.411	58.236	61.255
Median	0.293	0.157	4.140	99	99
Min	0.173	0.080	2.340	32	33
Max	0.852	0.546	8.070	234	234
Count	35	35	35	35	35
South Asian Benchmark	0.068	0.047	2.900	19.000	3.000

Where ***, ** and * indicates that the mean difference is significant at 1%, 5% and 10% level of significance, respectively.

MFBs to properly manage their assets and gross loan portfolio. Significant difference in means of cost per borrower ratio revealed the fact that the loan sizes differ from country to country between South Asia.

4.6 Productivity ratios

Table 6 reports productivity ratios. In line with expense and efficiency analysis, Pakistani MFBs are falling way behind in productivity from South Asian benchmark. The South Asian benchmark mean values of all productivity ratios are significantly higher than Pakistani MFBs. The difference is significant at 1% level of significance except for Depositors/Staff Member (Dep/SM) ratio which is still higher for South Asian benchmark, but the difference is insignificant. Overall productivity performance of Pakistani MFBs is very weak. From these numbers, it can be concluded that Pakistani MFBs are not productively utilizing its workforce. This could be either because of inefficient or incompetent management or Pakistani MFBs do not have right persons for the right jobs.

Table 6: Productivity Mean Analysis

Statistics	B/SM	L/SM	B/LO	L/LO	Dep/SM	PA
Mean	96.460***	98.174***	246.044***	252.958***	241.387	0.450***
Stand. Dev	52.832	56.021	185.160	210.638	302.619	0.147
Median	98	98	219	219	138	0.447
Min	26	26	68	68	37	0.209
Max	204	228	852	1089	1692	0.770

Count	35	35	35	35	35	35
South Asian Benchmark	282.000	296.000	449.000	496.000	273.000	0.590

Where ***, ** and * indicates that the mean difference is significant at 1%, 5% and 10% level of significance, respectively.

4.7 Risk Management ratios

Table 7 report risk management ratios. The mean value for Portfolio at Risk > 30 days ratio is greater than the South Asian benchmark which shows that Pakistani MFBs are facing greater recovery risk. However, for Portfolio at Risk greater than 90 days, Pakistani MFBs are not significantly different from South Asian MFIs. The Write-off to Gross Loan Portfolio (WOR) ratio indicates that Pakistani MFBs are facing greater write-off expenses than South Asian region. Write-offs are the expenses that incurs when the loans become uncollectable and the MFB just writes it off as expenses. This reduces the value of assets. Similarly, Pakistani MFBs' loan loss rates are higher than the South Asian MFIs. The overall risk ratio analysis shows that Pakistani MFBs are facing risk in terms of PAR > 30 days, write-offs and higher loan loss rates. Higher risk, lower efficiency and lower productivity is indicating the poor management of gross loan portfolio and total assets. This poor management and inefficiency ultimately resulted in negative returns.

Table 7: Risk Management Mean Analysis

Statistics	PAR > 30 Days	PAR > 90 Days	WOR	LLR	RC
Mean	0.080**	0.034	0.046***	0.037***	0.971
Stand. Dev	0.118	0.054	0.057	0.056	0.807
Median	0.022	0.008	0.036	0.023	0.637
Min	0.005	0	0	-0.002	0.153
Max	0.523	0.255	0.329	0.318	3.462
Count	35	35	35	35	35
South Asian Benchmarks	0.037	0.035	0.010	0.007	1.135

Where ***, ** and * indicates that the mean difference is significant at 1%, 5% and 10% level of significance, respectively.

4.8 Outreach ratios

Table 8 report and compare outreach ratios i.e. No. of active borrowers, percent of female borrowers, number of loans outstanding, Gross Loan Portfolio (GLP), Average Loan Balance per Borrower/GNI per capita, Average Outstanding Balance/GNI per capita. The mean difference between these ratios and South Asian Benchmark is significant at 1% level of significance. Mean values of first four measures of outreach of Pakistani MFBs are smaller than South Asian benchmark indicating Pakistani MFBs have lower outreach than South Asian MFIs. However, in terms of mean values of Average Loan Balance per Borrower/GNI per Capita and Average Outstanding Loan Balance/GNI per capita ratio where the mean value for Pakistani MFBs is greater indicating that Pakistani MFBs are serving poorest people as compared to the South Asian MFIs.

Table 8: Outreach Mean Analysis

Statistics	AB (million)	%FB	LO (million)	GLP (million)	ALBPB/GNI %	AOB/GNI %
Mean	0.134***	0.318***	0.138***	29.896***	0.222***	0.220***
Stand.Dev	143681.80	0.106	151165.400	3.12e+07	0.091	0.092
Median	119204	0.327	119204	2.68e+07	0.196	0.196
South Asian Benchmark	55.554 (millions)	0.925	47.549 (millions)	12820.174 (millions)	0.160	0.161

Where ***, ** and * indicates that the mean difference is significant at 1%, 5% and 10% level of significance, respectively.

In Table 9, mean values of depositors, deposit accounts and deposits are smaller than South Asian benchmark which mean that Pakistani MFBs have lower outreach than South Asian MFIs in terms of these three indicators. However, the rest of four ratios mean values are greater than South Asian benchmark indicating that the Pakistani micro borrowers are more engaged with their lenders as Pakistani MFBs have more average deposit account balance than the South Asian microfinance banks. All the mean values are significantly different at 1% level of significance except for Average Deposit Balance per Depositor/GNI per Capita, which is significant at 5 level of significance.

Table 9: Outreach Mean Analysis

Statistics	Depositors (million)	Deposit Acc (million)	Deposits (million)	ADB/ per Depr	ADB per Depr/ GNI %	ADAB	ADAB/ GNI %
Mean	0.316***	0.337***	3230.0***	125.73***	0.112**	126.877***	0.116***
Stand. Dev	621127.20	657175.40	3.67e+07	104.131	0.093	110.888	0.111
Median	133718	103030.3	1.19e+07	97	0.08	94.5	0.08
South Asian Benchmark	26.980 (million)	42.853 (million)	4412.742 (million)	75	0.075	57	0.055

Where ***, ** and * indicates that the mean difference is significant at 1%, 5% and 10% level of significance, respectively.

5. Conclusion & Recommendations

Based on the comprehensive analysis of thirteen outreach and thirty-two performance ratios, it is concluded that Pakistani MFBs' financial/operational performance is inferior to South Asian benchmark. Although Pakistani MFBs are more engaged with their borrowers but overall outreach is significantly lower than the South Asian benchmark. Financial structure ratios reveal that Pakistani MFBs preferred equity over debt financing, indicating that Pakistani MFBs are more risk averse than South Asian MFIs. As higher returns are often associated with properly managing and taking higher risks, in this light Pakistani MFBs should revisit their financing structure and financing strategies. Furthermore, in comparison to South Asian MFIs, Pakistani MFBs are retaining larger amount of deposits but not converting deposits into profitable investments. An efficient conversion of deposits into loans will increase the size of GLP which will be ultimately translated into profitability.

The overall financial performance ratios indicate negative returns on assets and equity for Pakistani MFBs. The main reason for negative returns is above average, out of proportion expenses incurred by Pakistani MFBs. This situation requires management to review assets and equity management policies and thoroughly analyze the root cause of all expenses and devise strategies for controlling and reducing them.

Revenue ratios shows the apparently good revenue position of Pakistani MFBs; however, these are diluted by the huge pile of financial, operating, personnel, and administrative expenses which ultimately resulted in the negative returns. Proper management policies should be adopted to control these expenses, improving the balance

between revenues and expenses. Additionally, expense ratios analysis highlighted the reasons behind negative returns despite strong revenues. Reduction of these damaging expenses may improve profitability and sustainability of Pakistani MFBs.

Efficiency ratio analysis highlighted the fact that in comparison Pakistani MFBs lack efficiency in all aspects. Their productivity is low and are facing higher risks in case of portfolio at risk greater than 30 days, write-off expenses, and loan loss rates. The poor performance of Pakistani MFBs can be attributed to overall poor management policies about financing structure, portfolio management and coverage of expenses. The outreach indicators also show that MFBs in Pakistan have lower outreach than South Asian MFIs which proves their lack of interest for expanding the circle of serving poor borrowers.

Based on ratio analysis of seven categories, this study concluded that the MFBs in Pakistan lack well-articulated management policies which resulted in their inferior performance and lower outreach growth as compared to the South Asian MFIs. Also, the lower growth in outreach level and poor performance of Pakistani MFBs indicates that there is no trade-off between outreach and performance. Current study results are in line with Rauf and Mahmood (2009) ; Ghalib (2013) that growth and performance of microfinance sector in Pakistan was affected by poor strategies.

This study offers the following suggestions for the improvement of microfinance banks of Pakistan.

- Bank's management, regulator and concerned stakeholders need to investigate to find out the root cause of inefficient operations, poor financial performance and lower growth of outreach level and then apply suitable remedies to solve these problems.
- Strategies should be formed to overcome the massive expenses which are consuming revenues and affecting assets value. Branchless banking may be a suitable option for reducing expenses on one hand and increasing outreach on the other.
- Since there is no trade-off between outreach and performance therefore, base of gross loan portfolio should be widened, and a greater number of poor borrowers should be served.
- A better loan recovery management mechanism should be adopted to reduce risk.

Well-established Corporate governance structures should be set to put the performance of microfinance institutions in the right direction.

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Appendix -1

Outreach & Performance Indicators		
	Ratios/Indicators	Description
1	Active borrowers	Individuals that have an outstanding loan amount.
2	Percent of female borrowers	It shows percentage of female borrowers calculated from total active borrowers.
3	Number of loans outstanding	It shows the amount of loans that have not been fully repaid and written-off.
4	Gross loan portfolio	Total outstanding principle balance of all outstanding loans of an MFI e.g. current, delinquent, and restructured loans and excluding written-off and interest receivables.
5	Average loan balance per borrower/ GNI Per Capita	It calculates the depth of outreach and shows how much MFI is focusing on poverty. lower value of the ratio means that MFIs are more poverty focused
6	Average outstanding loan balance/ GNI Per Capita	It shows the average amount of outstanding loans and tells about the depth of outreach and the level of focus of MFIs on poverty.
7	Number of Depositors	It shows the number of individuals that have deposited their funds with MFIs.
8	Number of deposit accounts	It shows the number of deposit accounts held by depositors. A deposit account is bank account where account holders deposit their money.
9	Deposits	It is total value of all deposit accounts. It includes current, checking, and saving accounts that are paid on demand by the account holders.
10	Average Deposit Balance Per Depositor	It shows average amount of deposits per depositor. It is calculated as dividing total deposits by number of depositors.
11	Average Deposit Balance Per Depositor/GNI Per Capita	It calculates average amount of deposits deposited by per depositor over GNI per capita.
12	Average Deposit Account Balance	It shows average amount of deposit accounts and is calculated as dividing the total deposits by number of deposit accounts.
13	Average Deposit Account Balance/GNI Per Capita	It shows average deposit account amount over GNI per capita.
Performance Indicators (Financing Structure Indicators)		
1	Capital-to-Asset ratio	It shows the portion of assets represented by capital. It shows whether the capital is enough to support total assets.
2	Debt-to-equity ratio	It shows that how much debt is used by MFBs to finance their assets as compared to the shareholder's equity.

3	Deposits-to-gross loan portfolio (Deposits/GLP)	It shows the portion of gross loan portfolio represented by deposits. Deposits are the banks' liability whereas gross loan portfolio is the banks' assets. The lower value of the ratio indicates that banks are less deposit based.
4	Deposits-to-total asset	It shows the percentage of assets that is financed by deposits. Lower ratio shows that MFIs are less deposit based.
5	Gross loan portfolio/ total assets (GLP/Total Assets)	It shows the portion of total assets represented by gross loan portfolio. Higher ratio shows that MFIs have converted their assets into profitable loan portfolio.
Overall Financial Performance Indicators		
1	Return on Assets (ROA)	It shows that how much return is earned by MFIs on their efficient management of assets. It shows profitability of MFIs.
2	Return on Equity (ROE)	It shows the ability of MFIs to earn return on shareholder's equity. It is also shows the profitability of MFIs from equity holders point of view.
Revenues Indicators		
1	Financial revenue to Assets (FR/A)	It shows the ability of MFIs to earn income from efficiently using their assets.
2	Yield on GLP (nominal)	It shows the ability of MFIs to earn financial revenue from loan portfolio.
3	Yield on GLP (real)	It is same as yield on gross loan portfolio but here inflation rate is deducted from it.
Expense Indicators		
1	Total expense-to-average total assets (TE/A)	It measures the total expenses which rise from managing assets of MFIs. It measures how MFIs cover their total expenses through proper management of their assets. Higher value of ratio indicates that MFIs are facing huge expenses. Total expense includes financial expense, operating expense, and loan loss provision expense.
2	Financial expense-to-average total assets (FE/A)	It measures how MFIs cover their financial expenses through efficient management of assets. Higher value of ratio means that MFIs are facing huge financial expenses. Financial expense includes expenses that are incurred on liabilities and deposits e.g. interests, fees etc. on liabilities.
3	Provision for loan impairment-to-average total assets (PLI/A)	It measures how MFIs cover provision for loan impairment expenses through efficient management of assets. Higher value points towards huge provision for loan impairment expenses.
4	Operating expense-to-average total assets (OE/A)	It measures how MFIs cover operating expenses through efficient management of their assets. Operating expense includes personnel expenses and administrative expenses but does not include financial expenses and loan loss provision expenses.

5	Personnel expense-to-average total assets (PE/A)	It measures the capability of MFIs to cover personnel expenses through proper handling their assets. Personnel expense includes salaries of staff, bonuses etc.
6	Administrative expense-to-average total assets (AE/A)	It measures the coverage of administrative expenses by properly managing assets. Administrative expenses are transportation expense, rent expense, supplies, utilities, and depreciation etc.
Efficiency Indicators		
1	Operating expense-to-average GLP (OE/ALP)	It shows the efficiency of MFIs to cover operating expenses by making a profitable gross loan portfolio. Higher value of ratio indicates that MFIs are suffering from high operating expenses.
2	Personnel expense-to-average GLP (PE/ALP)	It shows the efficiency of MFIs to cover personnel expenses by properly selecting a profitable gross loan portfolio. Higher value of ratio represents huge personnel expenses.
3	Average salary/GNI per capita (AS/GNI pci)	It measures average salary divided by gross national income per individual. Higher value indicates huge salary expenses.
4	Cost per borrower (CPB)	It measures operating expense incurred on managing average number of active borrowers.
5	Cost per loan (CPL)	It measures operating expenses incurred on managing of average number of loans.
Productivity Indicators		
1	Borrowers per staff member (B/SM)	It measures the capability of per staff member to produce maximum number of active borrowers.
2	Loans per staff member (L/SM)	It measures the capability of per staff member to produce maximum amount of loan.
3	Borrowers per loan officer (B/LO)	It measures the capability of per loan officer to produce maximum number of borrowers.
4	Loans per loan officer (L/LO)	It measures the capability of per loan officer to produce maximum amount of loan.
5	Depositors per staff member (Dep/SM)	It measures the capability of per staff member to produce maximum number of depositors.
6	Personnel allocation ratio (PA)	It measures the efficiency of MFIs. It is calculated as dividing number of loan officers by number of personnel.
Risk Indicators		
1	Portfolio at risk (> 30)-to-GLP (PAR>30)	It measures the portion of outstanding amount of gross loan portfolio that have past due by greater than thirty days. Higher the value of ratio indicates greater risk being faced by MFIs.

2	Portfolio at risk (> 90)-to-GLP (PAR>90)	It measures the portion of outstanding amount of gross loan portfolio that have past due by greater than 90 days. Higher indicator's value means higher risk is being faced by MFIs.
3	Write off-to-average GLP (WOR)	It measures the portion of gross loan portfolio that has been written-off by MFIs. Written-off loans are removed from the balance of gross loan portfolio and considered uncollectable.
4	Loan loss rate (LLR)	It shows the detailed picture of written-off loans. It is calculated as written-off minus value of loans recovered divided by average gross loan portfolio.
5	Risk coverage ratio (RC)	It measures how much MFIs cover portfolio at risk with their loan loss allowance.