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The Impact of Profitability of Micro Finance (Micro Credit) on the Banking Sector of Pakistan

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1.0 INTRODUCTION

In 1962, Milton Friedman an economist of America indicated that in a free society, people have only social responsibilities, but a business corporation does not have social responsibilities (Friedman & Milton, 1970). As this theory was opposed by, a professor of economics and an advocate of social businesses named as Muhammad Yunus have given a concept of Micro credit and Micro finance. Starting in 1976 Yunus gives the short loans to poor to make them entrepreneurs and to break the cycle of poverty. Therefore, for this Yunus introduced the Grameen bank and was awarded the Nobel Prize for this effort.

The money lending criteria of Grameen bank was very innovative because it was introduced in the form of group in this case if one if the group member lacks then all other group member will help him. *'The joint liability, along with a banking system based on trust and participation, has removed the need for collateral',* it says on the website of the bank (Grameen Bank, 2011). As after the formation of Grameen Bank many other Micro finance institutions were introduced and it is said that all over the world there are almost 3,500 MFIs.

In early 1980s with the support of Sir Aga Khan Micro-finance Emerged in Pakistan when *Aga Khan Rural Support Programme (AKRSP)* propelled its first credit procedures in the north in 1982 with the founding of *Orangi Pilot Project (OPP)*. In 1990s, the model presented by Aga Khan was employed in the entire country as with the foundation of two main programme named *National Rural Support Programme (NRSP)* and the *Sarhad Rural Support Programme (SRSP)*. These organizations supported the poor class with the highly subsidized services and very little efforts made to recover the given loan. In 2001, State bank of Pakistan (SBP) opened a Microfinance unit and helped government of Pakistan to create an institution named "The KHUSHHALI Bank" to serve the poor people (Muriu & W, 2011).

Micro credit can be viewed as a tool for expansion or as a form of business.it is observed that the increase in the expansion of microfinance is increasing the profitability. As the industry is changing so it is very interesting to inspect what essentially regulates the profitability (Armendáriz, Morduch, & Jonathan, 2010).

Decriers had raised on increasing of profitability and this claim for profit grounds the higher interest rates, and this becomes the clash in the mitigation of poverty lessening and Muhammad Yunus declared MFIs as greedy for profit by misusing the poor by making the large profits and stated that poor people are the very first legatees of microfinance (Publications, 2011).

There is a connection between the profitability of MFIs and the interest rate charged by MFIs so, it is assumed that it is a goal of MFIs to decrease poverty by creating cheap and small loans and growth in profitability.

1.1 Background of the Study

This segment assists as a classification of the industry and the issues that might influence the profitability of microfinance institutions. Likewise, concept behind profitability and interest rates of retail banks and their acquaintances to the microfinance industry are defined and scrutinized (Jorgensen & Norgaard, 2011).

1.1.1 The Industry

A plotting of the diverse definitions, features, and players in the industry are significant in order to get a consideration of the subsequent empirical analysis and the variables included (Jorgensen & Norgaard, 2011).

1.2 Definitions

Many terms of both microfinance and microcredit will be used during this research. This section defines the three most important and basic ones.

Microfinance and Microcredit

It is important to define both Microfinance and Microcredit separately because they are often similar.

Microfinance is a practice that introduced to help the poor class and low-income class with the variety of services. The varieties of services offered to change the financial needs of low-income individuals or households and small enterprises. The services that microfinance offers are Savings, Loans, Remittances, and Insurance as well as microfinance uses non-traditional methodologies, which any formal financial sector does no incorporate (Jorgensen & Norgaard, 2011).

MIX uses a functional definition:

"Microfinance services – as opposed to financial services in general – are retail financial services that are relatively small in relation to the income of a typical individual. Specifically, the average outstanding balance of microfinance products is no greater than 250% of the average income per person (GNI per capita)" (MIX, 2011)

Microcredit is a service, which gives the loans of small amount to the poor class and the other debtors who are disregarded by the other commercial banks. By the explanation, microcredit helps all creditors including formal applicants (such as specialized credit cooperatives set up by governments to encourage economic development) and of informal variety (such as the village moneylenders or even loan sharks).

To conclude the definition it can be said that microfinance is a field of industry and micro credit is a core service out of all financial services (Gibbons, David, W, & Jennifer, 2002).

1.2.1 Transparency

A review of "Microfinance in South Asia" by Blaine Stephens and Hind Tazi acmes the presentation of the microfinance segment in the South Asian region as well as globally. This study has emphasized South Asia because of the constituency's inspiring outreach with microfinance hulks in South Asia such as **Grameen Bank**, **ASA,** and **BRAC**. The microfinance segment has progressed by giving micro-loans as well as the self-help group programs in order to grasp to a massive mainstream of the poor people (Jorgensen & Norgaard, 2011).

1.3 The Problem Statement

To determine the contribution of micro finance towards the profitability of the banking system of Pakistan.

1.4 Objective of the Study

Research methods are adequate and essential way of probing new knowledge that uses adequate scientific methods in finding responses for what this research is done to ponder in a more professional way.

- To measure the performance of the microfinance-based financial services in Pakistan.

- To measure the attractiveness of the microfinance-based services to the conventional financial services businesses in Pakistan.

1.5 Significance of the Study

The importance of this research is that the microfinance sector is more profitable than other banks because of their loan giving process. They give loans to all people either the rich or the poor one. The default risk is very low because they give loan to all people in very little chunks and recovering the given loan is very easy when comparing to the loan recovery of the other commercial banks. How this campaign resolve he poverty issues and became more profitable than the other banking system in Pakistan. Therefore, for the answer of all the questions this research is carried out and for satisfaction and reliability some tests are applied to gain the authentic result, which logically answer the asked questions.

1.6 Scope of the Study

The scope of the study is restricted to the microfinance organizations in Pakistan's banking industry. In addition, microfinance organizations have been taken as a model from the Microfinance Information Exchange (MIX) and for this; five star rated microfinance institutions are nominated. This assessment has been given by MIX to the microfinance organizations based on the level of confession, class of confession, financial limitations etc. Grounded on this sample of MFIs taken, the enactment of the MFIs in Pakistan is examined. This study does not take into account the smaller MFIs in Pakistan and the MFIs in numerous other geographical sections in the world.

1.7 Limitations of the Study

The data for this study is gathered from only 24 MFIs, which are based on the rating given by MIX, and the exploration cannot be swiped for a massive number of MFI institutions in Pakistan.

In Pakistan, most of the MFIs do not report their accounting practices, which they usually follow to MIX.

1.8 Basic Assumptions of the Study

The basic supposition of this study is that during the period of my research, the economic condition will remain calm and the banking sector and its running program will be constant. It is assumed that the test applied on this study to prove the relationship of variables with each other will show the correct result.

Hence, it is assumed that all things will go smoothly as they are going will not interrupt this study from any angle.

2.0 REVIEW OF RELATED LITRATURE

2.1 Introduction

Introduction of microfinance in the early seventies by a Bangladeshi Economist Professor Mohammed Yunus who won Nobel Prize has spread across the globe as a means to alleviate poverty and develop entrepreneurs (Mawa & Bentul, 2008).

The conversion of the notion of Microfinance has been an ongoing process. It hand-me-down to mention the modest allocation of funds in the form of microcredit. Usually, the notion of it was "helping poor class people and families with a credit product." The credit given to those families by MFIs initially started from US $200 to $4001 (Ledgerwood & Joanna, 2001). The definition according to the Microfinance Handbook: "An Institutional and Financial Perspective" presents Microfinance as an "Economic Development approach intended to benefit low-income women and men" (Dacheva & Petra, 2000).

2.2 Historical Perspective

In the 1970s, the concept of microfinance was developed in Bangladesh and the first institution who offered this service was Grameen introduced by a famous economist Dr. Mohammad Yunus, who thought to help by provision of small, unsecured loans to mostly women, for enterprise development (Mendelson & Sam, 1970). Broadly, Microfinance is defined as financial amenities to the poor goes back as far as money and commerce. Paul Thomes of Aachen University, Fatoumata Camara, from WSBI (the World Savings and Retail Banks Institute, and N. Srinivasan, an India consultant with decades of experience in the industry) ran a session entitled History Perspectives in Microfinance – to present the context of microfinance services over the centuries (Sengupta, Rajdeep, Aubuchon, & P, 2008).

According to (Thomess & Paul, 1990) microfinance, is generally defined as it has had a recurrent environment for a long time. Old models of cooperatives and savings models, led to profit driven models, euphoria, disappointment, a push for optimization, and then a return to simplicity.

In this historical perspective, there is a comparison of financial services of European microfinance in the 18th and 19th Century, to 20th/21st Century in developing countries (Thomess & Paul, 1990).

Years before there were some challenges in this field. First, there are core challenges shared which are limited access to finance, the need for inclusion of large social groups. Second there are common general challenges which are fast growing populations, rural exodus (or urbanization), structural change from agrarian to industrial or service-based societies, collapsing social institutions, pauperism, lack of quality infrastructure, and from the individual perspective, poverty, lack of finance, and lack of security (Thomess & Paul, 1990).

Fatoumata Camara, from WSBI, gave a tour of informal financial services through history. In this study she has described how microfinance evolved, because it’s not new as Savings and Credit groups have operated from centuries. African countries have their Susus and Tontines; there are chit funds in India, Arisan in Indonesia, Cheetu in Sri Lanka these all are the examples of traditional models for taking savings and providing loans within societies (Camara & Fatoumata, 1990).

According to Fatoumata Camara WSBI is a unique placed to speak on retail banking formally and informally around the world, representing 7000 banks in 90 countries, with 570m customers represented. WSBI considers in giving the historical background for financial services as a prime origin of lessons learned from the past. As Fatoumata recounted, “the Irish

loan fund system in the 1720s was debatably the first formalized modern loan system to the poor". In 1823, the local bodies changed to financial bodies and in 1840s, a loan fund board created and about 300 funds were soon making small short-term loans (Camara & Fatoumata, 1990).

Throughout 1800s there was a drastic expansion in People's banks, cooperatives, and credit unions among the rural poor and in 1778 the first 'Communical' fund was created in Germany, which was the first 'thrift society', a communal savings fund in 1801, and the merging to the Rural Urban Networks of Credit Associations in 1889 (Camara & Fatoumata, 1990).

In early 1990s, the cooperative models started spreading around the globe specifically in Latin America, holding a double objective by this objective the commercialization of the rural sector improves. During1950s-70s, there was a strong emphasis on agricultural credit to small farmers, when targeted organizations in Latin America started accepting concessional loans to farmers, but performance was disappointing, and loan repayment to poor (Camara & Fatoumata, 1990).

By 1970s, there was a major move that underway with the rise of solidarity loaning, joint-liability credit within groups for income creating activities. By this, the 'modern' microfinance (microcredit, in reality) came into existence, something oft-repeated since Muhammad Yunus' Nobel Prize in 2006 (Camara & Fatoumata, 1990).

In 1980s, there was an emergence of a new dominant school of thought, which was the '*financial systems approach*'. According to this school, credit is not a useful input for agricultural expansion, but rather it is just one type of financial service that should be priced freely in order to promise its perpetual supply and eradicate regulating (Thomess & Paul, 1990).

As in 1990s, it was observed that there is recognition of microfinance when making strategy for poverty alleviation, and its efficacy by lofty plans. Beyond microcredit other services also started expanding, such as insurance and money transfer/remittances. With the emerging of new technology such as biometrics, smart cards, remittance platforms, and m banking, microcredit changed into microfinance, and this happens in 2000 and financial 'inclusion' or 'inclusive finance' became the dominant theory (Thomess & Paul, 1990).

Camara believes, instinctively favor reserves to loans for poor people, although around the world it might proposed otherwise for the craving of credit in underserved markets. Microfinance has evolved a lot from history to what it is today, but there are leanings and lessons from the past, which endure. The lessons from microfinance's history though have some importance the program of integration and it has linkages with history (Camara & Fatoumata, 1990).

Another economist named N. Srinivasan delivered a historical context of microfinance even in a broader scope, going back to the beginnings of finance itself. In this he answered three questions which are:

- What is microfinance's origin?
- When did finance as an enterprise begin?
- Was it ever 'micro'?

Taking the audience through Responsible Finance in history, Srinivasan reminded that as early the 4th Century BC, Dharmashastra in India decreed that lending on interest was one of 34 major sins, comparable to teaching for a salary or not taking care of one's parents. Someone who lent for interest, or profit, would be reborn five times as a low life form. It was not clear

whether this would include an investment banker. The Book of Moses, the Bible, and the Koran also forbade lending on interest or 'usury' as it came to be known (Srinivasan, 1997).

2.2.1 Conclusion of Historical Perspective of Microfinance

Gradually, it moved from sin to enterprise. From total prohibition, some lending on interest was permitted – although the Church would not allow a Christian burial to those who did. The Catholics, perhaps because of the long historical association of Jews with finance (we have all read the Merchant of Venice, I presume), took a long time to come around, and the right to lend with interest was declared heresy by Pope Clement V in 1311. It was not until 1545 that an Act in England gave legitimacy to lending for interest.

The history of microfinance is a long one, and shelves of books have been written on the subject. This session did not purport to summarize the literature, but rather to elucidate some of the themes, which have emerged over time. "History doesn't repeat itself, but it rhymes", said Twain. Moreover "those who don't learn from the past are doomed to repeat it", said Santayana. It would do us well, at this critical time in microfinance, to remember both Truisms.

Therefore, the lessons from this historical tour consists Poor people have excellent repayment; they are willing and able to repay. Credit allowed microfinance institutions to cover their costs, with high repayments and high interest rates allowing MFIs to look to long-term sustainability and reach large numbers.

However, there is much that remains 'traditional' in contemporary microfinance in certain markets. In Africa, historical and traditional schemes based on legitimacy, knowledge, values and enforcement have endured, alongside growing formalization of financial services: SACCOs in the East of the continent; COOPECs in the West, for example.

2.3 Current Perspective

Nowadays, there is a drastic change in the micro-credit giver institution because of their offering in a vast amount of services and tangible products to the poor class, which includes customer loans, reserves accounts, time guarantees, micro insurance, and global money transfers. There is huge profitability and sustainability in Micro finance in Latin American Region comparing to any other country in this world. This service is one of the most diverse service institutionally and abstractly which provide such multifaceted financial products to its customers. According to Microfinance Bulletin MFIs has provided this service to micro entrepreneurs who are moving towards the consumer, mortgage and low-end commercial loan segments along with this large end user focused are trying to strive in the microfinance market (Joanna, 2007).

The MFIs are also considering Non-Governmental Organizations (NGO), who has recently started looking like profitable institutions. Taking into justification the huge productivity ratio of this sector seems like this method is transformed very successfully and has affected the region in very positive way (Dacheva & Petra, 2000).

(Dacheva & Petra, 2000) Mentioned the shifting of MFIs to commercialization has significantly influenced the micro finance industry. As the modification in microfinance (Dacheva & Petra, 2000) shares his viewpoint into two opposing school of thoughts – *The Welfarists and The Institutionalists*:

According to the *Welfarists school of thought*, Welfarists are exclusively gathered to a social mission of Microfinance but on the other hand, *the Institutionalists* believe in creating of those institutions, which are more useful than those who actually transfer the funds. *Welfarists* believe that the whole commercialization process drives the entire microfinance institutions away from their mission.

2.3.1 Microfinance investment vehicles (MIVs)

In last few years, there is a growth in microfinance investment funds with the aim of assembling capital for MFIs from Foundations, Individuals, Institutional Financiers, and Development Organizations. However, in law the term venture fund misleads as in practice uses it as investment vehicle, which uses variation of debts, entresol, equity, and security instruments (Dieckmann & Raimar, 2007). Hence, the word Microfinance Speculation Vehicle best describes the current funding structure. As in the end of 2006, there were around 74 different investment vehicles. Comparing debt instruments to sub-debt instruments the equity investment is hardly included in MIVs because in MFIs the equity incentives are difficult to place at reasonable prize because of their riskiness and exit strategies proves it to be difficult until local capital markets may grow and became clear in the less develop areas (Dieckmann & Raimar, 2007).

1.1.1.1 Three major investment approaches

According to the degree of commercialism, the MIVs are divided into three types:

- Microfinance Development Funds
- Dual-Objective Microfinance
- Commercial Microfinance Investment Funds

The *Microfinance Development Funds* acts as a non-profit organization with a primary target of development of the MFIs by allowing capital without seeking of the financial return as mentioned it is a non-profit organization. Usually, all the funding is done below the rates

offered in market by technical assistance. All the lending in this fund done by investors, corporations, development agencies, and privately owned foundations with a gain in the form of social return, which will help in maintaining the real inflation. When comparing the above investors to the other socially minded investors, these investors usually refrain from giving grants and donations. Primarily these funds target the financial sustainability of MFIs (Dieckmann & Raimar, 2007).

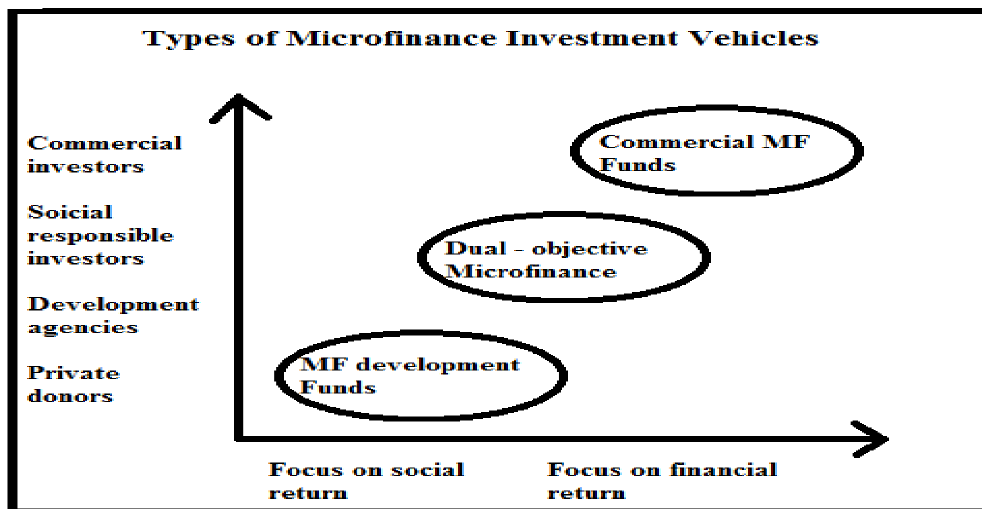

Figure 1: Microfinance Investment Vehicles

The *Dual-Objective Microfinance* has an aim to create balance between social return and financial return and eventually they seek for financial return because their return is below than market return. In this investment vehicle, the donors are development organizations and socially responsible depositors (Dieckmann & Raimar, 2007).

The *Commercial Microfinance Investment Funds* have preset rate of return and the social return plays a secondary role. The donors are individual and private investors and institutional investors, development agencies. This fund primarily invests to MFIs on proper criteria and tries to elevate the notch of clearness of their investments by analyzing the financial reports of Micro finance institutions (Dieckmann & Raimar, 2007).

2.3.2 Conclusion of Current Perspective of Microfinance

Microfinance sector is currently alleviating poverty and working for social development while at the same time sticking to the original mission and capital market participants to achieve a greater degree of non-governmental organizations to dominate the traditional donor-driven framework.

In this study, it has been demonstrated that it is no necessary that a greater degree of institutional and individual investor involvement is only a key prerequisite to narrow the immense funding gap of MFIs and to scale up microfinance but it also unites social and financial returns which offers private- sector investors an attractive dual-nature investment opportunity (Dieckmann & Raimar, 2007). Apart from poverty mitigation, microfinance includes constant financial returns over the economic phase, low loan portfolio default rates, and potentially low connotations to mainstream capital markets. Currently the microfinance sector has total projected loans of USD 25 Billion unsettled and it is unable to serve more than a fraction (~100 m) of the sector's probable demand of 1-Billion micro-borrowers. This condition is as interpreted into a huge gap, which amounts to USD 250 Billion. According to Raimar Dieckmann, the closing of funding gap will remain a huge task for a long time (Dieckmann & Raimar, 2007), but on the other side, it can be addressed by dual investment initiatives in particularly *tier 1* MFIs of public and private sector investors, with IFIs leveraging profitable funding by financing in junior and intermediate tranches of MIVs finance instruments. On the other side, IFIs might emphasis on providing riskier funding to smaller *tier two* MFIs while, over time, a growing number of institutional financiers might become eager to invest in more junior tranches of CDOs. Hence, mass of further social and commercial investors for less risky parts of a CDO that finance in *tier one* MFIs in the long term (Dieckmann & Raimar, 2007). With a normative point of view, the full progress of local

financial systems are designed for what enable MFIs to reinvest themselves from retail deposits, and bank loans to access to domestic capital markets. For the long time, microfinance establishes an emerging financing opportunity that institutional and individual financers just have started to realize. However, we see valid reasons that, by 2015, private sector depositors will promotes their investments in microfinance significantly around to USD 20 Billion, which Includes IFI projected funding by $5 Billion by 2015, total foreign funding is projected to increase to roughly by $25 Billion (Dieckmann & Raimar, 2007). On the one hand, microfinance investments will steadily become a well-known niche investment product, which is gradually attracting retail investors. Moreover, it will demand to a wider range of commercial financiers as it might even be beneficial to effective portfolio modification. Furthermore, a critical mass of MFIs will become capable over time for captivating foreign funding (R, 2005).

2.4 Research Gap Filled by This Research

As this study is present as an empirical study and is pretend on whether commercialization damages depth of outreach, using financial data from a nine organizations, whose operational activity is 91%-100% related to microfinance. In order to describe the whole procedure of commercialization, this research will also provide data on the origin of microfinance, customary methodology and recognized models. It is also taken into interpretation about the importance of the deployment of savings, as one of the main personas of commercialization and its influence on people and organizations. In this research the other financial products and services which are being offered as a part of the fully- fledged financial institutions also scrutinized. This study also examines the threats, which are faced by all microfinance users in Pakistan.

2.5 Area for Further Research

As this research study is accompanied in Pakistan on the microfinance banks in comparing their profitability with other Banks so, there is a room for others to conduct this research in other countries.

It can also be done that within Pakistan the same research can be conducted by changing the research variables.

Still there are many researches done making microfinance as the base of the research but there are very few researches done regarding the study which is done in this research in the other countries so other can do ample of researches regarding this topic.

3.0 RESEARCH METHODOLOGY

3.1 Research Design

3.1.1 Research Philosophy

This research mainly focuses the profitability of Micro finance in banking sector of Pakistan.

In this research, the application of Positivism is used to find the relation between the microfinance institution and their profitability so in this regard the quantitative approach is being considered for this research, which will help in exploration, and for diagnosis of microfinance institutions.

3.1.2 Research Approach

The research approach in this study is used is deductive approach for microfinance institutions to determine what factor influence the profitability.

3.1.3 Research Strategy

The research strategy which is used in this research and which has captured the main emphasis in this study is the analytical way and empirical analysis of data. This is my individual view, which does not affect the deduction of the problem statement. In this research, use of analytical approach is done to make an objective view, first in the background study consisting of both description, analysis, and some theory and secondly in the empirical analysis based on data.

3.1.4 Research Choice

The research choice which is used in this research and which has captured the main emphasis in this study is the Mono method.

3.1.5 Research Time Horizon

The time horizon in this study is cross-sectional in nature because of the limited time (Saunders, Lewis, & Thornhill, 2009).

3.1.6 Research Technique

The research method in this research is the analysis of the income statement of all the microfinance institutions and those heads which are require in the analysis of profitability are selected, analyzed and interpreted by explorative and diagnostic study.

3.1.7 Research Procedure

Procedures followed to conduct this research are as followed:

- Introduction and Background of the study
- Literature review of the study
- Research Methodology
- Analyzing and Interpreting the data gathered
- Conclusion and Recommendations

3.2 Research Structure

3.2.1 Statement of the Problem

We need to determine that how microfinance can increase the profitability so, we need to analyze all microfinance industry.

3.2.2 Research Questions

The question on which this research conducted is "How micro finance has its impact the profitability of banking sector of Pakistan."

3.2.3 Research Objectives

Research method is an adequate and decisive way of probing new acquaintance that uses adequate scientific methods in finding responses for what this research ponders in a more professional way.

Thus, there is a grim need for the study of the microfinance strategy and its awareness in Pakistani society that is there any increase in profitability in banking sector of Pakistan by the introduction of Micro finance policies. Such a study would repossess material of what the MFIs

or the management wants and what deviations are made to make the profitability of MF business nurture.

3.2.4 Conceptual Framework

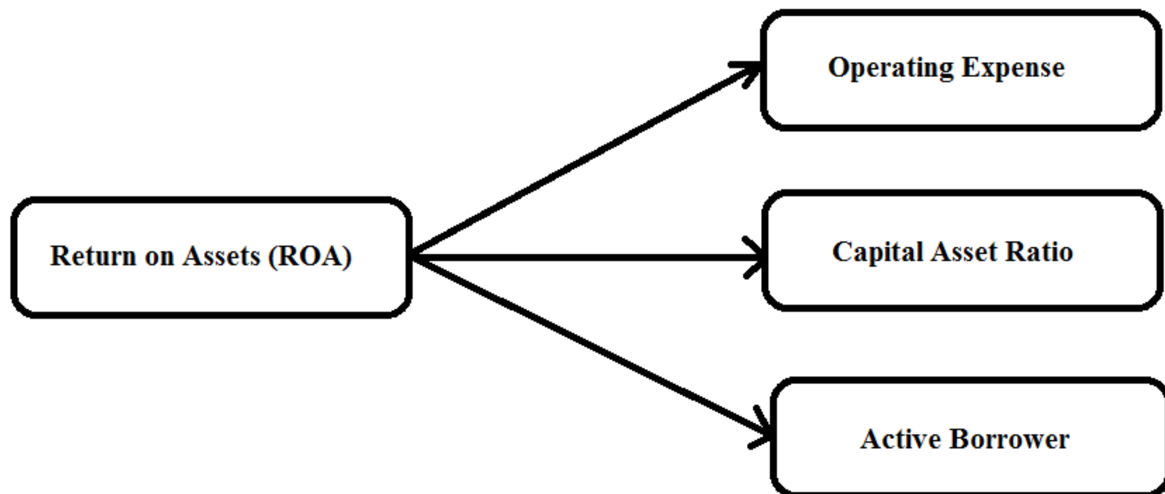

Figure 2: Conceptual Framework

3.2.5 Research Variables

Variables in this research are as under:

Dependent variable

- Return on Asset (ROA)

Independent variable

- Operating Expense
- Capital Asset Ratio
- Active Borrower

3.2.6 Hypothesis

H1 Hypothesis on Return on Asset (ROA) is positively related with the Active Borrower

of Micro finance Institutions (MFIs).

In Hypothesis 1, Return on Asset (ROA) is a dependent variable and Active Borrower is an independent variable.

H2 Hypothesis on Return on Asset (ROA) is positively related with the Operating Expense of Micro finance Institutions (MFIs).

In Hypothesis 2, Return on Asset (ROA) is a dependent variable and Operating Expense of Micro finance Institutions (MFIs) is an independent variable.

H3 Hypothesis on Return on Asset (ROA) is positively related with the Capital Asset Ratio

of Micro finance Institutions (MFIs).

In Hypothesis 3, Return on Asset (ROA) is a dependent variable and Capital Asset Ratio is an independent variable.

3.3 Research Tools and Techniques

3.3.1 Justification for Selected Tools and Techniques

In order to analyze the data and other research work, help of Microsoft Office and IBM SPSS is taken. Codding the data on SPSS, Response coding, data entering and editing can easily be done with these software. In this study, linear regression is used as the technique to find results.

3.3.2 Population and Target Population

The total numbers of institutions who are giving the facility of microfinance in Pakistan are fifty-two and according to this research all, those banks are taken in consideration who offers the service of micro finance.

3.3.3 Sample Size

The Sample size in this research is eight banks because there are only 52 institution who offers the facility of microfinance and as taking 8 banks as sample simply represents all those institutions who offer the same service of Micro finance.

3.3.4 Method of Sampling Selected and its Justification

There are two types of sampling methods probability and Non-probability sampling. Sampling technique used in this research is convenience sampling which is the part of Non-probability sampling. By this technique researcher uses that data which is easily accessible to him (Saunders, Lewis, & Thornhill, 2009).

4.0 DATA GATHERING AND PROCESSING

The data set used in the empirical analysis is found on the website of MIX market, under "Data Analytics," where a file with MIX Market MFI data is downloaded. MIX currently holds reported data from 1933 institutions, constantly adding new institutions and improved data. Some institutions report only general information, where others report several years of audited financial statements and ratings or other due diligence reports.

The downloaded file contains many different variables. Based on background study and other previous research studies in this area of research, I have chosen 4 variables, which I have included in my original model for the empirical analysis. These variables are discussed in the following section.

4.1 Description of variables

Nature of the variable	**Identity of the variable**	**Abbreviation**	**Definition**
Financial Performance Profitability	Return on Assets	ROA	(Net Operating Income - Taxes) / Average Assets
Expenses	Operating Expense	OE	Operating Expense / Average Total Assets
Financing structure	Capital / Asset Ratio	E/A	Total Equity / Total Assets
Outreach	Number of Active Borrowers	NAB	Number of Borrowers with loans outstanding, adjusted for standardized write-offs

The sample chosen, i.e. the data set is from the fiscal year of 2009 and had a number of 1140 observations before screening. The data is cross sectional data since it is a type of one-dimensional data set. The data is collected by many MFI's at the same point in time without regard to differences in time. The analysis consists of comparing the differences among the subjects.

After a screening where observations with only few data variables available are excluded, the number of observations in the sample is downsized to 902 observations. Reliability of the data is of high importance, and therefore, when looking over the data, two other measures must be taken; all observations with a "D/E" Debit to Equity ratio less than zero are deleted as are all observations with gross loan portfolio to total asset over 1. Despite the screening, the data set is kept as large as possible in order to include as many of the institutions as possible and not just the biggest institutions or the institutions that have the best performance etc. Data is found both in the respective local currencies, where local currency is used in this sample since it creates an easier ground for comparison, despite currency fluctuations. As the institutions have been selected based on their amount of data, the data sample can, however, not be a perfect representative sample of all the MFI's in the world. A sense of the skewed distribution is therefore detected, but it is still the best possible sample that can be produced since MIX offers the biggest and most reliable sample. As also mentioned in the introduction, the skewed sample is partly due to the fact that the MFI's can voluntarily submit their data, and maybe only some kinds of institutions feel like contributing to the transparency of the industry. The sample does, however, collectively serve a large fraction of microfinance customers worldwide, and in this sense, is can be seen as a representative sample (Cull, Robert, Demirgüc-Kunt, Morduch, & Jonathan, 2005).

4.2 Variable discussion

The different variables included in this original profitability model and the discussion is mainly based on background study. The variables are discussed, and when checking the assumptions, during the regression matrix, and in the process of finding the final profitability model, I exclude the variables that are not relevant. MFI"s should seek to maximize performance in many areas, whether it is social or economical. This could be improving outreach, minimizing risk, reducing costs and strengthening returns among others. Improving efficiency, productivity and other measures should be the road to profitability and thereby financial sustainability. MFI"s should increasingly adopt good management structures and incorporate existing efficient banking practices in their management (Ayayi, 2010).

There are many kinds of measures of profitability. Return on assets (ROA) as being the dependent variable is the most basic and most comparable measure of profit for MFI's with independent variables as Operating Expense, Capital / Asset Ratio, Number of Active Borrowers (Gaul, 2011).

4.3 Hypothesis Analysis

4.3.1 Linear Regression between Return on Asset and Number of Active Borrower

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.912[a]	.831	.803	.0234147

a. Predictors: (Constant), Number of Active borrower

b. Dependent Variable: Return on Asset

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.009	1	.009	4.955	.068[b]
	Residual	.011	6	.002		
	Total	.020	7			

a. Dependent Variable: Return on Asset

b. Predictors: (Constant), Number of Active Borrow er

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.106	.021		5.159	.002
	Number of Active Borrow er	6.005E-007	.000	.673	-2.226	.068

a. Dependent Variable: Return on Asset

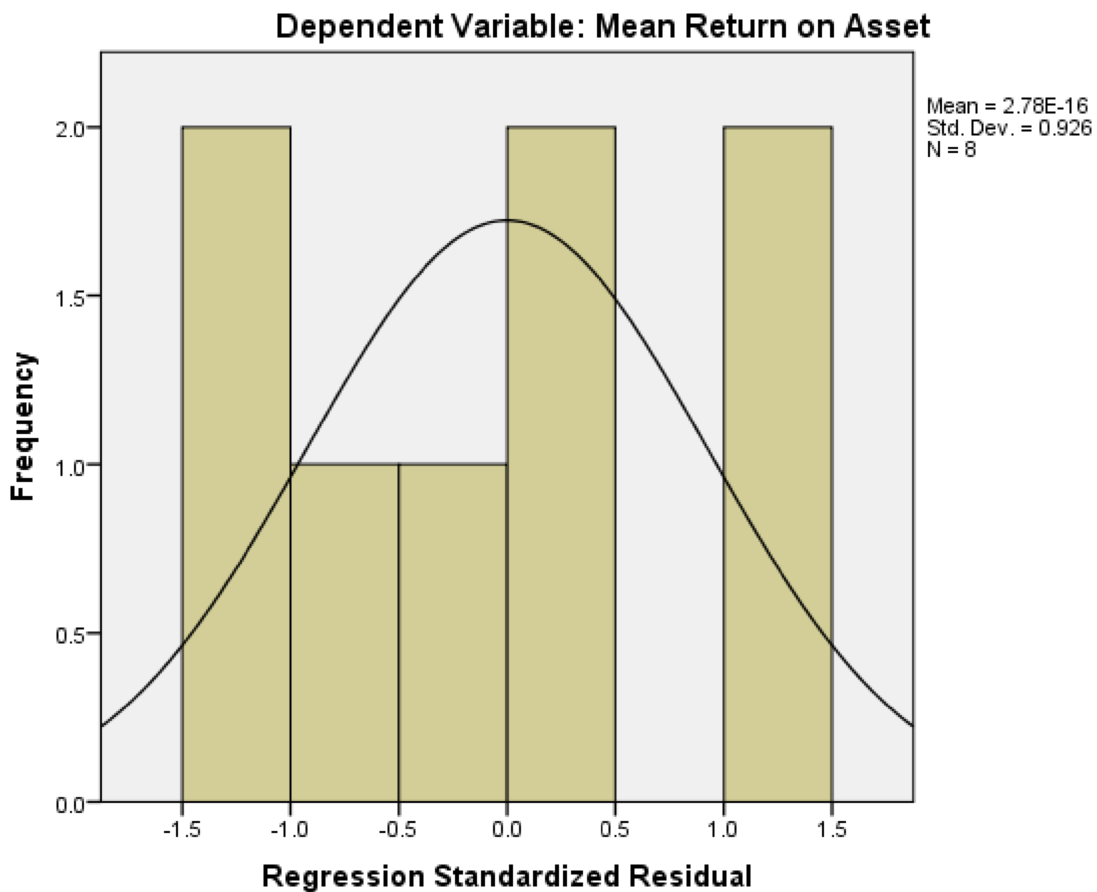

Figure 3: Frequency Table for Number of Active Borrower

Interpretation:

The above data shows the relationship between return on asset as dependent and Number of Active Borrower as independent variable. The above test shows that if there is a slight increase in Number of people who use to borrow money on the form of loan from MFIs it will result in a parallel increase in Return on Asset. As loans are given in small chunks so there is a negligible factor of risk, which is 0.673, can be mitigated.

4.3.2 Linear Regression between Return on Asset and Operating Expense

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.832[a]	.721	.703	.0234147

a. Predictors: (Constant), Operating Expense

b. Dependent Variable: Return on Asset

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.001	1	.001	.169	.695[b]
	Residual	.019	6	.003		
	Total	.020	7			

a. Dependent Variable: Return on Asset

b. Predictors: (Constant), Operating Expense

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.081	.025		3.279	.017
	Operating Expense	-4.033E-011	.000	.166	-.411	.0695

a. Dependent Variable: Return on Asset

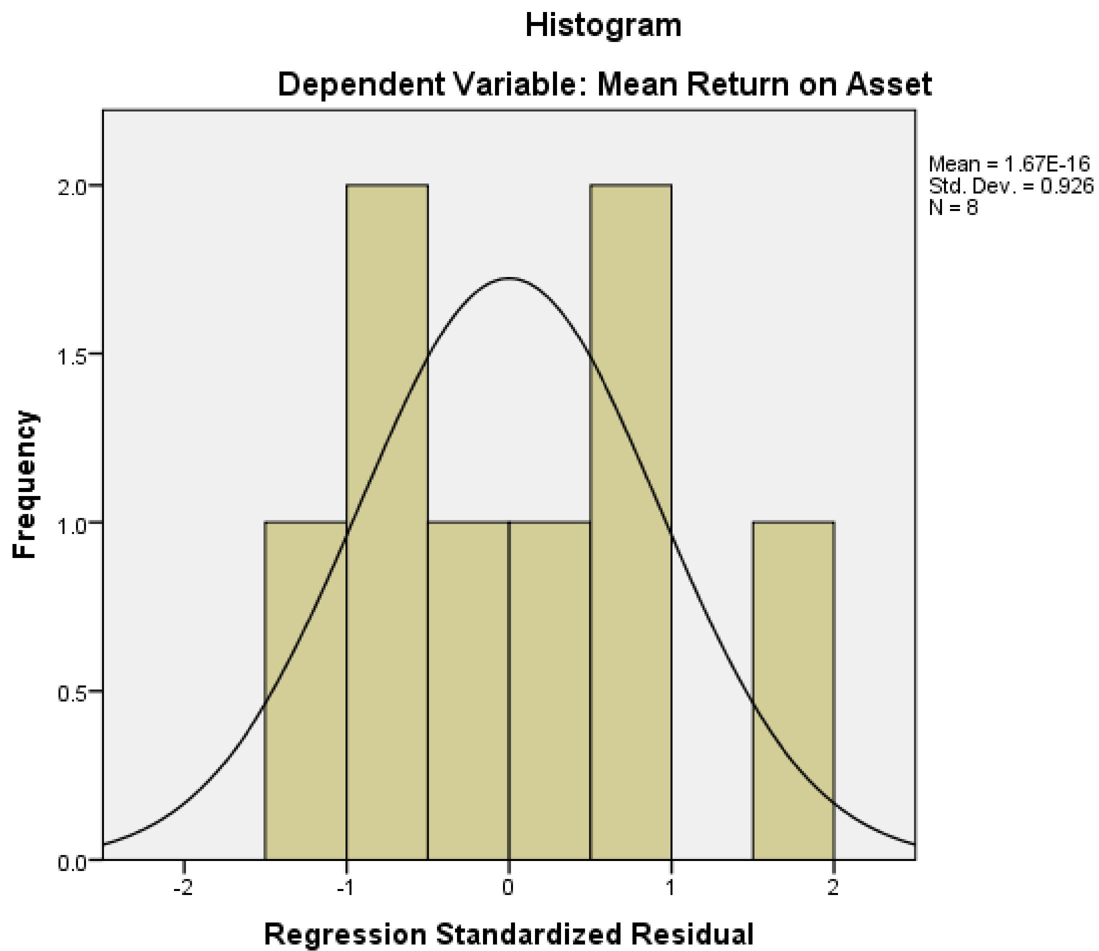

Figure 4: Frequency Table for Operating Expense

Interpretation:

The above data shows the relationship between return on asset as dependent and Operating Expense as independent variable. The above test shows that if there is a slight increase in Operating Expense will result in a parallel decrease in Return on Asset. Therefore, the MFIs should invest less on Operating Asset and there is a negligible factor of risk, which is 0.166, can be mitigated.

4.3.3 Linear Regression between Return on Asset and Capital Asset Ratio

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.912[a]	.831	.803	.0234147

a. Predictors: (Constant), Mean Capital Asset Ratio

b. Dependent Variable: Mean Return on Asset

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.016	1	.016	29.570	.002[b]
	Residual	.003	6	.001		
	Total	.020	7			

a. Dependent Variable: Return on Asset

b. Predictors: (Constant), Capital Asset Ratio

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.001	.016		-.069	.947
	Mean Capital Asset Ratio	.110	.020	.912	5.438	.002

a. Dependent Variable: Return on Asset

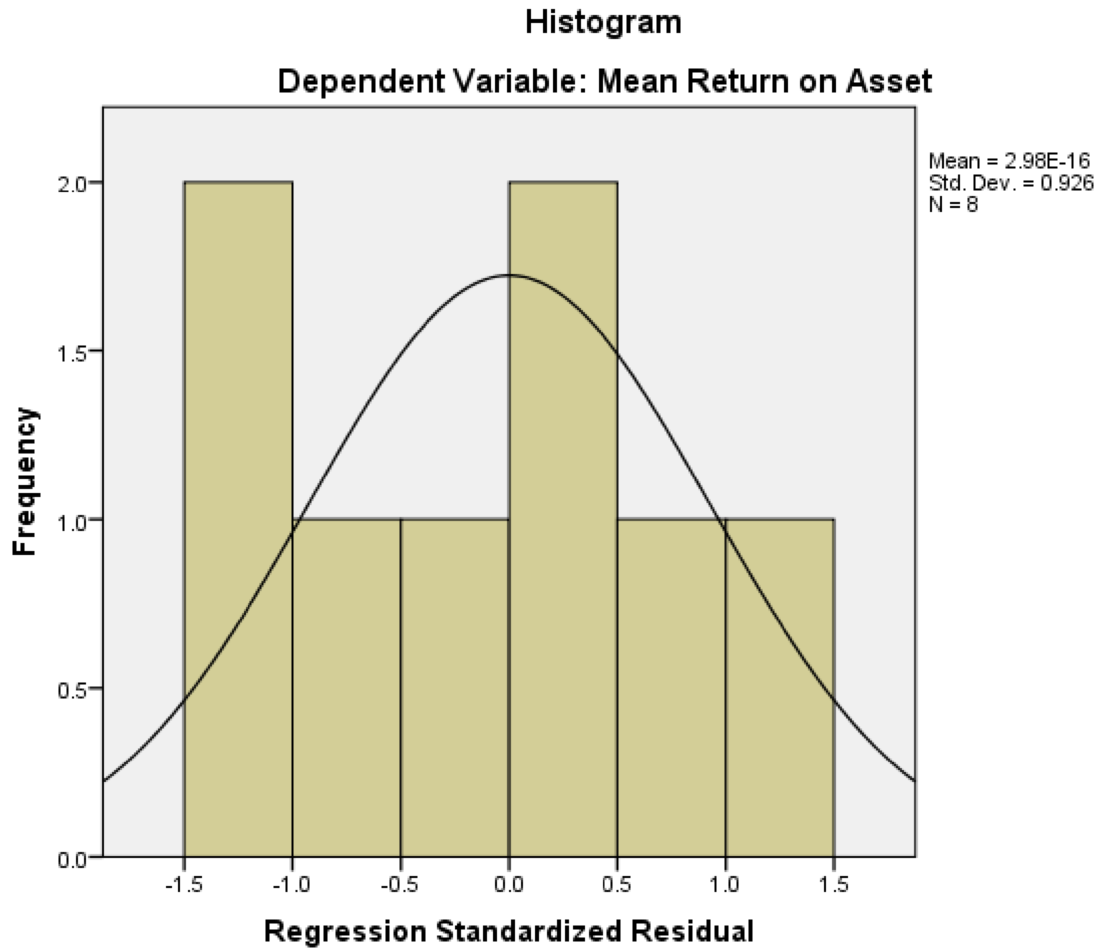

Figure 5: Frequency Table for Capital Asset Ratio

Interpretation:

The above data shows the relationship between return on asset as dependent and Capital Asset Ratio as independent variable. The above test shows that if there is a slight increase in Capital Asset Ratio it will result in a parallel decrease in Return on Asset. There is a considerable factor of risk, which is 0.912, it can't be mitigated but can be reduced.

5.0 CONCLUSION AND IMPLICATIONS

All the results derived above show the impact of MFIs to banking sector of Pakistan in a positive way by the relation of independent to dependent. Although all variables when work together then there is a massive increase in MFIs profitability which positively affects the banking sector of Pakistan.

Factors that statistically influenced profitability positively were the operating expense over loan portfolio which had a positive influence, and number of active borrowers. On the other side, there is capital asset ratio, with a negative influence over Return on Asset. The unexpected signs of the variables could be explained by other influencing variables or other relationships than linear. It is, therefore, clear that there is still much diversity in the industry, and no clear set of best practices for becoming profitable has been defined. However, as the industry is young and still changing, this is not a surprising result.

Therefore, it is recommended that more MFIs should be opened like other commercial banks to have a prosperous economy, an increase in GDP by decrease in unemployment.

References

Appendix

List of Companies

1	Apna Microfinance Bank
2	ADVANS Microfinance Bank
3	NRSP Microfinance Bank
4	Pak-Oman Microfinance Bank

5	Tameer Microfinance Bank
6	U Microfinance Bank
7	Waseela Microfinance Bank
8	First Microfinance Bank

Data Table

List of Companies	ROA 13	ROA 12	NoAB 13	NoAB 12	OE 13	OE 12	CAR 13	CAR 12
Apna Microfinance Bank	0.1499	0.1762	8606	6597	124559804	84753436	2.284	0.3682
ADVANS Microfinance Bank	0.1321	0.0861	6346	4750	8290910	3486686	1.0527	1.0861
NRSP Microfinance Bank	0.0281	0.0171	171718	92521	757018811	526715272	0.1019	0.1579
Pak-Oman Microfinance Bank	0.0458	0.0735	4803	2910	327675	106436894	0.3469	1.0067
Tameer Microfinance Bank	0.0251	0.028	197811	97885	1828605	1353755	0.8867	0.1009
U Microfinance Bank	0.0891	0.0702	1220	9643	218388468	31837021	0.8582	1.0653
Waseela Microfinance Bank	0.1608	0.0777	16273	88569	352233848	143538134	0.5945	0.9633
First Microfinance Bank	0.0321	0.0034	129987	5340	837967	643572	0.142	0.0343