

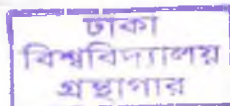


# **Developing a Model for Evaluating MFIs Operating in Bangladesh**

**Thesis Submitted for the Degree of  
Doctor of Philosophy (PhD), University of Dhaka**



465956



**Institute of Business Administration  
University of Dhaka  
December 2011**

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বিশ্ববিদ্যালয়  
গ্রন্থাগার

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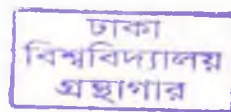
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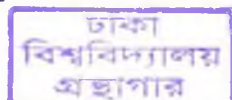
**Institute of Business Administration  
University of Dhaka  
December, 2011**

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Finally, I have tried my best to complete this dissertation work as per standard required by the IBA, University of Dhaka. However, the undersigned researcher takes the sole responsibility of any errors or omissions that remain in the work.

**Dated:** 30 Dec. 2011



**Md. Zamanur Rahman**

## EXECUTIVE SUMMARY

Microcredit is branded as a key tool for alleviating poverty despite the criticism that it keeps the poor in debt. It reaches millions of poor people, particularly women, and it can be sustainable both for its beneficiaries and for the institutions. Recent achievement by Dr. Mohammad Yunus and his "soul" Grameen Bank as a Nobel laureate and the success story of millions of beneficiaries in Bangladesh and implementation of Grameen Bank model throughout the world have proved that Microfinance model has a potential to play a critical role in decoding poverty. However, with the success of microcredit, diversification and dimensions, the future challenges and criticisms also increased simultaneously. Despite many initiatives taken by Bangladesh as well as other international agencies, this diversified and growing sector is still struggling for a uniform evaluating system like CAMEL for formal financial sector which is in line with the dimensions of MC and will combine the financial as well as nonfinancial aspects .

Taking all these into consideration, this study aspires to introduce a model for evaluation of MFIs. The study also aspires to incorporate both qualitative and quantitative aspects in its approach for the performance evaluation of the MFIs depending on the unique dynamics of microcredit as well as MFIs like "sustainability and outreach." Though finding out an effective way to combine qualitative as well as quantitative aspects is critical, and developing a model for MFIs as well as for the microfinance industry is more critical. Because the history of research in evaluating the formal financial (bank) sector is focused in predicting bank failure and early warning system which was pioneered by Altman (1968).

This study undertakes the mission to identify standards for the assessment of the organizations of informal financial sectors, where MFIs are predominant concerns which will serve the purpose for this immense sector as served by CAMEL for the formal financial sector. It is guided by two major questions: how this combined effort will benefit the regulating and funding agencies and how the proposed model can serve the purpose?

To increase the confidence of the significant stakeholders like funding, auditing and regulating agencies (e.g. PKSF, MRA) the proposed study will benefit immensely. As MFIs increasingly aspire to have access to formal financial markets for capital as well as to increase the outreach, the need for having a uniform assessment framework to evaluate their performance is important. It can also increase the accessibility to formal commercial bank by mainstreaming the graduated and non PKSF MFIs (90%) to the formal sector from the informal funding sources which also considered important and challenging for its dimensions and vulnerability.

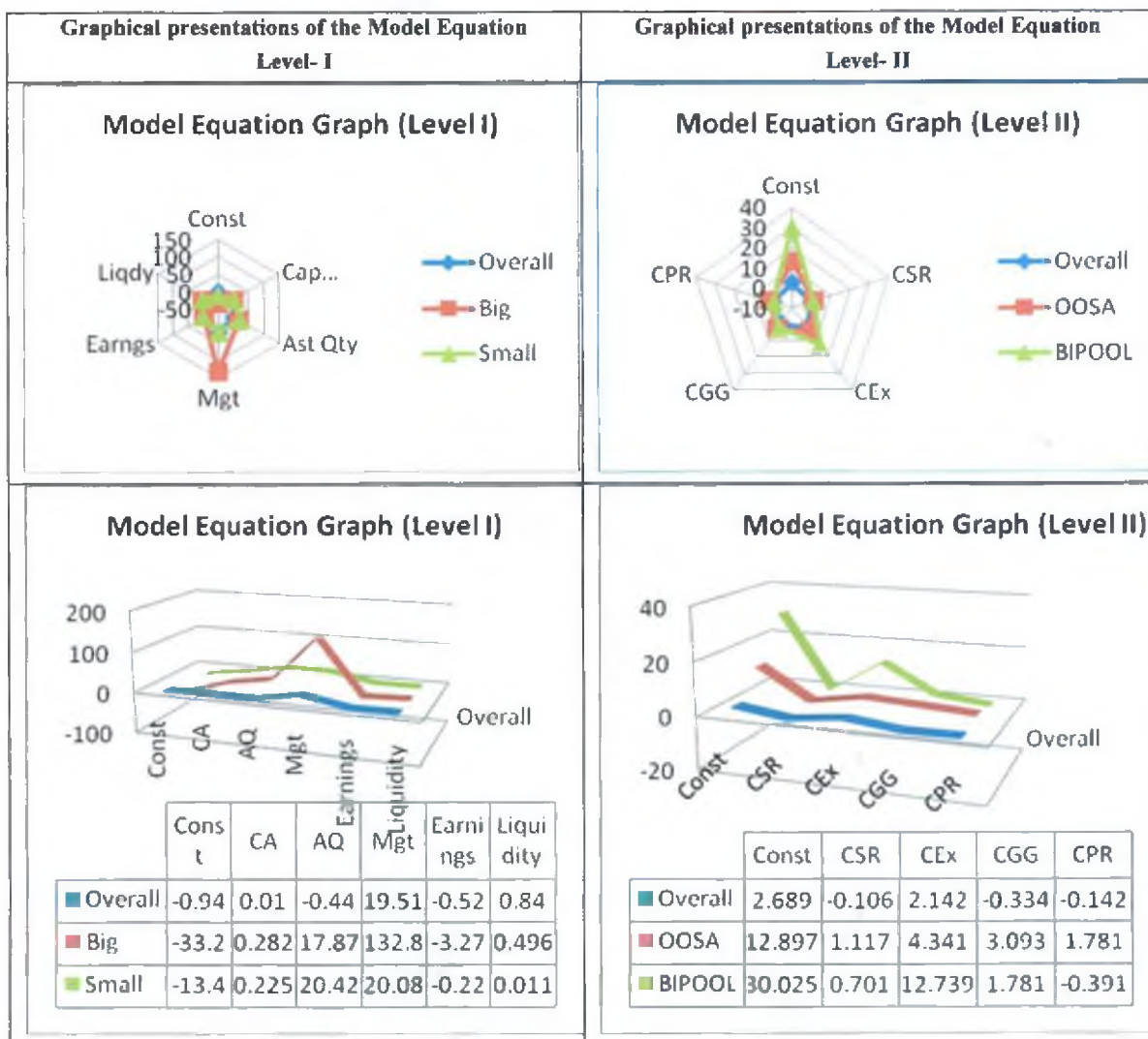
It is not easy for a bank and formal financial institution to monitor the activities of MC because of lack of expertise and dimensions as needed to monitor closely for its different

lending methodology. On the other hand, MFI has its own mission and vision which is different from the formal financial institution as it has to achieve the “sustainability and outreach.” Developing a model for financially viable and mission matching (socially justifiable) MFI for microcredit management can play a vital role for funding agencies as well as for the regulatory agencies to use it as an assessment tool that allows an MFI affiliate institutions to reach the highest standards of performance.

Under the circumstances, the need for a unique and universal offsite and periodical monitoring tool for the regulatory and funding agencies has become important since this industry is growing horizontally and vertically throughout the country as well as the criticisms against MC is also immense. The criticisms include: is microfinance really a step on the road to economic growth, or is it a short-term palliative, making poor people poor? Can an MFI really work if it embraces the “double bottom line” of both profit and social goal? Is microfinance keeping the vulnerable poor in debt? Should microfinance be reaching the poorest? The involvement of some MFIs (such as Proshika, GB) in politics with ownership crisis and the recent experience of Andhra Pradesh of India make these questions more relevant.

#### **Model for Quantitative Aspects**

The methodology of the study is developed giving emphasis on the audit report for the quantitative data (level I) and on questionnaire for qualitative data (level II). For doing so, a total of 112 active Partner Organizations (POs) of PKSF have been randomly selected from the wing of BIPOOL and OOSA working throughout the country. Then it performs the exploration and identification of potential areas and variables through screening and avoiding duplication. Factor Analysis is conducted eventually for the selection of preliminary variables and major areas for the two aspects. After conducting Factor Analysis, the variables and areas considered significant are processed for Linear Discriminant Analysis after being weighted by the Taylor expansion of the Logit model. For considering the quantitative aspects that matter in evaluating MFIs and volatile nature and dimensions of microcredit, the following ratios are selected through Factor Analysis: **DER** (Debt to Equity); **PAR** (Portfolio at Risk); **DSCR** (Debt Service Cover Ratio); **DR** (Delinquency Rate); **ODR** (On Demand Realization); **OSS** (Operational Self-sufficiency); **ROE** (Return on Equity); **IAPA** (Income to APA); **OCAPA** (Op. Cost to APA); **SR** (Savings Rate); **KTA** (Capital to TA); **CPTL** (Cost Per Tk. Lent); **ROA** (Return on Assets) **KTAW** (Cap To Total Asset Without FA) and **CR** (Current Ratio). These are later weighted for deriving the five major areas of CAMEL and then analyzed through LDA. Considering these quantitative aspects, volatile nature and dimensions of microcredit, the following model is derived.



**Model for Qualitative Aspects**

To derive the model for qualitative aspects the variables and areas considered significant are processed for Linear Discriminant Analysis after screening the variables and areas by avoiding duplication which is being weighted by the same Taylor expansion of the Logit model. For determining the variables, six principles of the client protection campaign like avoidance of over-indebtedness, transparent pricing, appropriate collections practices, ethical staff behavior, mechanisms for redress of grievances and privacy of client data are given preference. Other than these, different business models, like Hermes' Approach and ISO 26000 have been used to derive the major areas and variables. The issues identified and checked considering the dimensions of MC are later weighted through Logit model for deriving the four major areas of qualitative aspects which mentioned here as variables of level-II, and then analyzed through LDA. The variables are Response in disaster (SR1), Internal control (SR2), Interest rate (SR3), Cash flow Proj. (SR4), Over indebtedness (SR5), Ethical practices (SR6), Prog. coverage (Ex1), Efficiency (Ex2) and Insurance (Ex3), Loan



class (GG1), Service charge (GG2), Reserve (GG3), Last AGM held (PR1) and No. of EC meeting this Yr (PR2) which are later weighted for deriving the four major areas (CSEGP) like commitment to social responsibility (SR), commitment to serve the excluded people (Ex), commitment to good governance (GG), and commitment to poverty reduction (PR) for the excluded people. Considering these qualitative aspects, volatile nature and dimensions of microcredit, the above model is derived.

### Findings

Combining the financial as well as non-financial (social) aspects, the study found the following findings from the derived model:

- It is the management and commitment to the excluded people coverage which has dominated the model to discriminate within and between the categories.
- The linear equation and critical value are the major outputs of LDA which measure the strength and performance of the individual MFI and discriminate the MFI by category as well as within category by comparing the critical value (cut off point) with the score of that MFI. For quantitative aspects, critical value is identified as 0.945 for the overall, 33.203 for BIPOOL and 13.425 for the OOSA category, whereas for qualitative aspects, this is identified as 2.689 for the overall, 30.025 for BIPOOL and 12.897 for the OOSA category. The coefficient and “sign” of the variables of the equations indicate the strength and relationship among the variables of the MFIs. Another feature of LDA is score which has given for individual MFI contributing in grading for the industry.
- For quantitative aspects, the role of management can discriminate the three categories significantly, where the role of asset quality also discriminates between the overall and the categories (BIPOOL/OOSA), whereas the role of Earnings, CAR, Liquidity, and Asset Quality between the categories and overall categories are also significant in discriminating them. Again, the role of liquidity situation for the big categories POs is opposite but less strength in discriminating overall and small categories.
- For qualitative aspects, the role of CEx can discriminate the other categories significantly where the role of CSR, CGG, CPR discriminates between the overall and the categories (BIPOOL/OOSA) for the qualitative aspects respectively.
- The role of commitment to the excluded people can discriminate the three categories significantly, whereas the commitment to poverty reduction to the excluded people, commitment to good governance (CGG), and commitment to social responsibility (CSR) have to trade off among these which is similar with the trend of social cost and returns in the early stage (Todaro and Smith 2008). Moreover, the relationship among Commitment to Good Governance (CGG), Commitment to serve the excluded people (CEx), Commitment to Social Responsibility (CSR) and Commitment to Poverty Reduction (CPR) to the excluded people is positive between the BIPOOL/OOSA categories and overall categories.
- The correlation associated with the rank based on quantitative (level-I) and qualitative (level-II) function is 0.81, which indicates a very strong correlation. The Pearson and Spearman’s correlation is associated with the level-I and level-II score are 0.81 and 0.624 respectively and significant at .01 level.
- The correlation associated with level-I score and the 4 dimensions of qualitative aspects is very significant, which indicates if an MFI can perform excellent financially it can

contribute in qualitative aspects significantly.

- The correlation associated with level-II score and the 5 dimensions of quantitative aspects are not very significant, which indicates that financial performance does less matter with the performance of qualitative aspects. Standards for the industry and for the category and cut off point may be identified from the equation model.
- The mean of the identified variables for the categories will not be the same for both quantitative and qualitative aspects. The model will validate for the real data. This is possible to reduce and group the potential variables for both quantitative and qualitative aspects.
- The model developed for quantitative and qualitative aspects will be representative. The identified variables will be focusing on measuring financial (qualitative) and non-financial (quantitative) performance directly though social performance is excluded in spite of tremendous social impact on empowering women. There is a positive link between rating and performance evaluation.

### **Recommendations**

- It is the management and commitment to the excluded people coverage which has dominated the model equation to discriminate within and between the categories. This finding recommends giving emphasis on management for achieving the mission of sustainability as well as to commitment to the excluded people for achieving the social mission of the MFI.
- Though MFIs have to trade off between financial and social performance, in the long run social return will be higher than the social cost.
- This study recommends the variables to be considered for determining the rating system of MFIs by using a multivariate analysis which focused on outreach and sustainability.
- The identified variables measure the financial and non-financial performance directly expressed through the five areas of CAMEL though social performance is excluded in spite of tremendous social impact on empowering women.
- The equations for the quantitative and qualitative aspects denote the model for any MFI which can be graded for the overall as well as for the categories. The grading system developed from the model will be capable of grading the MFIs for both quantitative and qualitative aspects.
- An initiative can be taken to develop a unique and universal rating system for measuring the financial as well as the social performance of the MFIs so that the apex funding regulatory authority as well as the donor and government agencies can use the model to avoid criticisms and achieve the mission of the MFIs. The higher performing MFI has a greater access and acceptance to capital as well as to the donor and funder.
- The two models developed for quantitative and qualitative aspects will be representative for the industry. The cutoff point derived for the category will separate the category for both quantitative and qualitative aspects.
- Finally, the model can serve for this sector as CAMEL is serving for the formal financial sector.

**Conclusion**

In the context of ongoing criticism and simultaneous growth of outreach, the study accommodates all the dimensions and diversification by establishing a unique and universal evaluation system which will establish order and discipline in this sector and counteract the criticism and take MC to the next stage of sustainable development.

The study finally concludes that MC per se is not responsible for all the criticisms it is facing now. It is the management and commitment of the MFIs for which MC can be good or bad though there maybe tradeoffs between some quantitative and qualitative aspects like client coverage. Otherwise, it works on its own way i.e. it alone might not alleviate poverty but it has tremendous potential in generating aspiration to the poor people and transform them into marginal economic soldier to fight against poverty.

### Declaration

The thesis on 'Developing a Model for Evaluating MFIs Operating in Bangladesh' has been submitted by Mr. Md. Zamanur Rahman for the degree of PhD, University of Dhaka. The materials embodied in this thesis are original. It has neither been copied from any written documents nor has been submitted to anywhere in part or full for any other degree or diploma of any university.



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Dr. M Z Mamun  
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## Abbreviations

ALO	Average Loan Outstanding
AOD	Amt. Overdue
ACCION	Americans for Community Co-operation in Other Nations
APA	Average Performing Asset
ARFTP	Amount Recoverable for the Period
ARUTP	Amount Recovered Up to the Period
ASA	Association of Social Advancement
BARD	Bangladesh Academy for Rural Development
BAS	Bangladesh Accounting Standard
BASE	British Aid to Support Enterprise
BIPOOL	Big Partners Organizations Operating in Large Area
BoP	Bottom of Pyramid
BRAC	Bangladesh Rural Advancement Committee
BSC	Balance Score Card
CA	Current Assets
CACL	Current Asset to Current Liabilities
CAMEL	Capital Adequacy, Asset Quality, Management, Earnings, Liquidity Management
CAR	Capital Adequacy Rate
Com.	Commitment
CGAP	Consultative Group to Assist the Poorest
CPUCL	Cost Per Unit of Currency Lent
CRR	Cumulative Rate of Recovery
CSR	Corporate Social Responsibility
DER	Debt Equity Ratio
DFID	Department for International Development
DFI	Development Finance Institution
DGM	Deputy General Manager
DMR	Debt Management Ratio
DR	Delinquency Rate
Ex.	Excluded (People)
FC	Financial Cost
FCAPA	FC to Average Performing Asset
FCB	Foreign Commercial Bank
FINCA	Foundation for International Community Assistance
FS	Financial Services
FSS	Financial Self-sufficiency
GG	Good Governance
GNP	Gross National Product
GDP	Gross Domestic Product
GOM	Gross Operational Margin
IAPA	Income to Av. Performing Asset
IC	Imputed Cost
IDB	Inter-American Development Bank
IPO	Initial Public Offering
IT	Information Technology

KMFI	Kenya Microfinance Institution
KTA	Capital (K) Total Asset
KTAW	Capital to Total Asset Without FA
LDA	Linear Discriminant Analysis
LLP	Loan Loss Provision
LOS	Loan Outstanding
MC	Microcredit
MF	Microfinance
MER	Monitoring, Evaluation and Rating
MFIs	Micro Finance Institutions
MRA	Microcredit Regulatory Authority
MIS	Management Information System
MIX	Microfinance Information Exchange
NBFC	Non-Banking Financial Company
NCBs	Nationalized Commercial Bank
NGOs	Non-Government Organisation
NIn	Net Income
NOM	Net Operating Margin
NOL	No. of Loans
OC	Operational Cost
OCAPA	Op. Cost to Av. Performing Asset
ODA	Official Development Assistance
ODR	On Demand Realisation
OOSA	Organizations Operating in Small Areas
OPIN	Operational Income
OSS	Operational Self-sufficiency
OTR	On Time Realisation
PAR	Portfolio at Risk
PCBs	Private Commercial Bank
PEARLS	Protection, Effective financial structure, Asset quality, Rates of returns and cost, Liquidity, Signs of growth
PKSF	Palli Karma-Sahayak Foundation
POCA	Productivity of Other Current Asset
PO	Partner Organisation
PSIC	Private Sector Initiatives Corporation
RBI	Bank Rakyat Indonesia (BRI)
ROSCA	Rotating Savings and Credit Association
ROA	Return on Assets
ROE	Return on Equity
RR	Reserve Ratio
RWA	Risk-Weighted Asset
SCALE	Self-Sufficiency, Capital Adequacy, Asset Quality, Liquidity and Earning Ratios
SEEP	Small Enterprise Education and Promotion
SOS	Savings Outstanding
SP	Services Provided
SR	Savings Ratio/Social Responsibility
TA	Total Asset
Tin	Total Income

TOS	Total Outstanding
TP	Target People
USAID	Agency for International Development
WAN	Wide Area Network
WCCU	World Council of Credit Unions

## Appendix A

### List of Appendices

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## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background

Microcredit (MC) is branded as a major way of alleviating poverty despite the criticism that it keeps the poor in debt. According to the World Bank 2009 report, almost half of the world's population (over 3 billion) lives on less than one dollar a day. Reed (2011) reports as of December 31, 2009, 3,589 microcredit institutions reported reaching 19.01 million clients, 12.82 million of whom were among the poorest when they took their first loan. Of these poorest clients, 81.7 percent, or 10.46 million, are women. Microcredit offers those who were previously considered "un-bankable" because of their lack of collateral, an opportunity to expand their businesses, increase their incomes, and transform their lives in a better shape. It is a mechanism for poverty reduction and rural development (Philanthropedia 2011). Microcredit programs in Bangladesh are implemented by NGOs, Grameen Bank, state-owned commercial banks, private commercial banks, and through specialized programs of some ministries of Bangladesh government. In the microfinance sector total loan outstanding is around TK 200 billion (including Grameen Bank, TK 62 billion) and savings TK 140 billion that have been rendering among 30 million (including 8 million clients from Grameen Bank) poor people which help them to be self-employed that accelerates overall economic development process of the country (Philanthropedia 2011). Though more than a thousand of institutions are operating microcredit programs, only 10 large Microcredit Institutions (MFIs) and Grameen Bank represent 87 percent of total savings of the sector (around TK 122 billion) and 81 percent of total outstanding loan (around TK 162 billion). Through the financial services of microcredit, these poor people are engaging themselves in various income generating activities and around 30 million poor people are directly benefited from microcredit programs (MRA 2011). But after the intervention of MC around since the late 1970s small loans are growing (more than 21.6%) vertically and horizontally (Daley-Harris 2009) and making a big difference in developing countries. In 2005 it enjoyed the accolade of a UN international year. The reasons for this success are obvious. It reaches millions of poor people, particularly women, and it can be profitable both for some of its customers and also for the institutions which finance it. Recent achievement in 2006 by Dr. Yunus and his "soul" Grameen Bank as a Nobel laureate



and the success story of twenty million beneficiaries in Bangladesh and expression of interest to replicate the Grameen Bank model throughout the world have proved that MFI has a potential role to play in eradicating poverty. However, with the success of microcredit, diversification and dimensions as well as future challenges criticisms have also increased simultaneously. On the one hand, diversification and dimensions in terms of product variation (product for “monga” area and “non monga” area), objectives of the investors (sustainability) and donors (outreach), funding (directly or through intermediaries) and lending methodology (individual or group based), outreach (horizontal and vertical) etc. and on the other hand, the criticisms against MC and the involvement of some of MFIs (like Proshika and GB) with politics and the recent experience of Andhra Pradesh of India make it more complicated. Moreover, the general context does indeed give rise too much questioning about the evolution of the microfinance sector (Littlefield & Rosenberg 2005), whereas its real contribution to a set of societal goals such as the fight against poverty, local development or the reduction of social inequalities is still subject to debate (Hulme and Mosley 1996, Morduch 1999, Pitt and Khandker 1999). In practice, MFIs have provided different hybrid of financial services to a class of people who are excluded from the main stream services and MFIs have got a different mission other than the traditional financial mission though they have limitations for access to funds.

Despite MFIs increasingly aspire to have access to formal financial markets for capital, the need for having an assessment framework to evaluate their performance is important which will take the MFIs to the next level.

To cope with the situation, Bangladesh and other international agencies have undertaken a number of initiatives focusing on Monitoring, Evaluation and Rating (MER) of MFIs to keep this sector sustainable. Bangladesh as a pioneer has also taken initiatives to promote MC and make this sustainable. After Grameen Bank and Palli Karma Sahayak Foundation<sup>1</sup> (PKSF), Microcredit Regulatory Authority<sup>2</sup> (MRA) is the recent bold initiative taken by Bangladesh to promote MC as well as meet its future challenges.

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<sup>1</sup> In the early 1990s, Palli Karma Sahayak Foundation (PKSF) and its affiliated network of institutions in Bangladesh recognised an increasing need to access capital from formal financial markets to achieve massive client outreach. In evaluating such a need for financial performance information, PKSF held a series of financial management workshops to train microfinance managers. As a result, PKSF came up with a mechanism for assessing performance of the Micro Finance Institutions (MFIs), especially designed as a response to the specific challenges the microfinance industry confronted. Moreover, the PKSF made efforts to develop a rating system for its own use.

Moreover, recent global financial crisis due to failure of both policy makers and bank regulators to identify the reasons and how to differentiate sound banks from troubled banks in order to ensure that banks continue to provide credit to the private sector is a primary concern and has risen to the top of the agenda at the recent world government summits.<sup>3</sup> Consequently, development of more effective early warning models of bank failures would prove of great value in dealing with the current crisis as well as in preventing future crises.

## **1.2 Issues and Aspects that Matter in Evaluating MFIs**

Microcredit programs have emerged as an antipoverty instrument in many low-income countries. They target the poor, especially women, with financial services to help them become self-employed in rural non-farm activities of their choice. In contrast, microcredit programs of the village banks supported by apex financing organizations and intermediaries provide financial services in response to market failures in which formal financial institutions failed to cater financial services to small- and medium-scale enterprises. No matter whether they are instruments for poverty reduction or market failure, microcredit programs practice financial intermediation for their targeted clientele.

### **1.2.1 MC vs. MFIs Issues**

#### **a. Capital Adequacy and Risk vs. Evaluation**

From the general concept of capital management it is well known to us that capital adequacy is important to maintain so that the risk will be offset. Thus it is important to get the answer what should be the measure of capital adequacy and risk for MFIs activity and are capital adequacy and risk related with rating?

#### **b. Scale, Outreach and Growth (Size) vs. Evaluation**

Outreach, which indicates the size, is the measurement of scale for the operation of an MFI. The more of the outreach of an MFI the more of the scale or size will be considered. But the question is what should be the measure of scale and outreach and is there a

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<sup>2</sup> Microcredit Regulatory Authority (MRA) is a government body, established in August 2006 by an Act of the Parliament, namely "Microcredit Regulatory Authority Act, 2006." The objective of MRA is to bring NGO-MFIs under a regulatory framework with a view to ensuring transparency and accountability in the activities of these institutions operating in Bangladesh.

<sup>3</sup>The United Nations held a global summit on financial crisis on 14 to 16 September 2009 in Washington, D.C., after a series of follow up meeting.

positive and significant relationship between MFI size and rating?

**c. Portfolio Quality and Profitability vs. Evaluation**

Portfolio quality and profitability of an MFI are related significantly. There is a positive relationship between portfolio quality and profitability of a financial organization. Though there is a set of ratios for portfolio quality and profitability, the question to be answered that whether there is a positive and significant relationship between MFI profitability and rating assigned.

**d. Productivity and Efficiency vs. Evaluation**

Productivity and efficiency are positively related. Productivity and efficiency are to be defined in the context of MFIs to get the answer that whether there is a significant positive relationship between MFI efficiency and productivity with rating.

**e. Sustainability vs. Evaluation**

Risk is a key issue in the rating process because the rating expresses the likelihood of a company to meet its repayment commitments. Poon et al (1999) find a significant relationship between risk variables and rating assigned to financial institutions. So there is a need to find the answer whether there is a negative and significant relationship between MFI risk and rating assigned.

**f. Type I vs. Type II Errors**

The accuracy of the proposed system to be analyzed in terms of two types of error, conventionally called Type I and Type II errors.<sup>4</sup> There is a trade-off between Type I and Type II errors. Anyone can achieve 0 percent Type I error without a model simply by identifying all banks as likely to be downgraded. By identifying all banks, one has certainly identified all banks that will actually be downgraded. However, one has also identified as problems all of the banks not actually downgraded, so Type II error is 100 percent. Conversely, one can easily attain 0 percent Type II error by identifying no banks; however, this is 100 percent Type I error. In general, the more banks are identified by a

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<sup>4</sup> Type I errors consist of false negatives or, more colloquially, “freeing the guilty.” In this context, a false negative is failing to detect a downgrade before it occurs, so the level of Type I errors is the percentage of downgraded banks that the model did not identify as problems. Conversely, Type II errors consist of false positives, or “convicting the innocent.” The level of Type II errors is the percentage of banks that are identified by the model, they are yet found to be sound by a subsequent examination.

model, the lower the Type I error and the higher the Type II error.

### 1.2.2 Dilemma of Financial vs. Social Performance in Evaluation

Is social performance profitable? The question may be cynical, but nevertheless relevant for microfinance to keep its “promise” of being an economically viable development tool (Morduch, 1999). Study found that indicators of outreach or social performance can be weighted, quantified or prioritized (Yaron, McDonald and Piprek 1997) and also indicates how an MFI is performing in reaching social goals like women in development, creating an educated mother, empowering women (Morduch 1999; Conning 1999; Pinches and Mingo, 1973; Mangiameli and West, 1999); Mar Molinero et al, 1996; Poon et al, 1999 and Cinca, 2006) and found it difficult to relate between these.

The Social Performance Task Force defines social performance as: “The effective translation of an institution's social mission into practice in line with accepted social values that relate to serving larger numbers of poor and excluded people; improving the quality and appropriateness of financial services; creating benefits for clients; and improving social responsibility of an MFI.”

Most MFIs have a social mission that they see as more basic than their financial objective, or at least co-equal with it. There is an adage that institutions manage what they measure. Social performance measurement helps MFIs and their stakeholders focus on their social goals and judge how well they are meeting them. Social indicators are often less straightforward to measure, and less commonly used than financial indicators that have been developed over centuries. However, increasing use of social measures reflects an awareness that good financial performance by an MFI does not automatically guarantee client interests are being appropriately advanced.

There is a dilemma of considering social performance in rating MFIs which is also a goal for MFIs. Should the rating incorporate social performance issues? Or, would it be necessary to create specific ratings to measure social performance? If MFIs with good social performance have also good financial performance, only one rating will be necessary. Arguments in favor of MFIs are that the poor give back their credit.

The trade-off between financial viability and reaching very poor people is much less acute than many once thought. A number of financial providers have managed to offer high-quality financial services to very poor people while also covering their costs.

Moreover, correlation between MFI profitability and client poverty level has proven to be a statistically weak one. This may be more driven by the vision of particular MFIs than by any inherent unprofitability of low-end microcredit.

For example, Grameen Bank, well known as a successful model that has surpassed the frontiers of the MFI world, has reported repayment rates of 98% serving over 20 lakh landless borrowers (Morduch, 1999). Also, lending rates are high enough to guarantee MFI survival (Conning, 1999); and MFIs that reaching their social aims are able to get more money from donors. However, empirical research shows that it is difficult to discover MFIs excellence in both the social and financial fields (Morduch, 1999). Facing this dilemma, we will not take part for any alternative, but the hypothesis may be tested to get the answer whether there is a positive and significant relationship between MFI social performance and rating assigned.

### **1.2.3 Scope of Social Intervention vs. MC and MFIs**

Currently, there are a few social interventions that have been combined with micro financing to increase awareness of HIV/AIDS. For example “Intervention with Microfinance for AIDS and Gender Equity (IMAGE), which incorporates micro financing with “The Sisters-for-Life” program- a participatory program that educates on different gender roles, gender-based violence, and HIV/AIDS infections to strengthen the communication skills and leadership of women. “The Sisters-for-Life” program has two phases: phase one consists of ten one-hour training programs with a facilitator and phase two consists of identifying leaders amongst the groups, train them further, and allow them to implement an Action Plan to their respective centers.

Microfinance has also been combined with business education and with other packages of health interventions. A project undertaken in Peru by “Innovations for Poverty Action” found that those borrowers randomly selected to receive financial training as part of their borrowing group meetings had higher profits, although there was not a reduction in “the proportion who reported having problems in their business.”

### **1.2.4 High Rate of Interest vs. Commercial Microfinance**

Bangladesh's former Finance and Planning Minister late M. Saifur Rahman once accused that some microfinance institutions charge excessive interest rate and also raised the question “is MC adding value to GDP or not?” In recent years, an increasing attention

has been paid to the problem of interest rate disclosure, as many suppliers of microcredit quote their rates to clients using the flat calculation method, which significantly understates the true annual percentage rate.

Though there is criticism about the impact of microcredit towards the development of borrowers' i.e. either MC is empowering the poor or engulfing them in a vicious cycle, the issues of sustainability of MFIs vs. MFIs clients,<sup>5</sup> many empirical studies (Zahir et al, 2001) reveal that the turnover ratio of microcredit is more than two times than the traditional business loan and the concept of commercial microfinance does not justify the high rate (30% effective) of interest.

### 1.2.5 Whether MFI is a substitute of “Mohajan”

The formal banking services are not the substitute of the MFIs' services. MFI's services are the formal substitute of the informal money lenders because there is still places where there is no MFI services. A study conducted by CGAP revealed that poor class people still borrow from “Mohajan”(the informal moneylenders) and save with informal collectors. They receive loans and grants from charities. They buy insurance policy from state-owned companies. They also receive funds from their relatives working in abroad who transfer money through formal or informal remittance networks. It is not easy to distinguish microfinance from similar activities. It could be claimed that a government can order it's state banks to open deposit accounts for poor consumers, or a moneylender that engages in usury, or a charity that runs a heifer pool which are also engaged in microfinance. Ensuring financial services to the poor people is best done by expanding the number of financial institutions available to them, as well as by strengthening the capacity of those institutions. In recent years emphasis is giving on expanding the diversity of institutions as different institutions serve different needs.

The CGAP study reveals that -

- a. Poor people need not just loans but also savings, insurance and money transfer services.
- b. Microfinance must be useful to poor households: helping them raise income, build up assets and/or cushion themselves against external shocks.
- c. Subsidies from government and donors are getting scarce and uncertain; rustic people of our country cannot get accessibility for that, so to reach microcredit to the large number of poor people, the MFIs must be made capable to pay for itself.

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<sup>5</sup> Beneficiaries of the MFIs to whom MC is provided.

- d. Microfinance means building permanent local institutions.
- e. Microfinance also means integrating the financial needs of poor people into a country's mainstream financial system.
- f. The government has to provide financial services to the poor.
- g. Funds from the donors and government should have come to support the private capital.
- h. The capacity build up of the management of MC and MFIs is very essential for strong financial institutions. Donors should focus on capacity building.
- i. Interest rate ceilings hurt poor people by preventing MFIs from covering their costs, which chokes off the supply of credit.
- j. MFIs should measure and disclose their performance, both financially and socially.

Microfinance is considered as a tool for socio-economic development, and can be clearly distinguished from charity. Families that are destitute, or so poor, who are unlikely to be able to generate the cash flow required to repay a loan should be recipients of charity. Others are best served by financial institutions.

#### **1.2.6 Whether MC a Poverty Alleviating Tool or a Poverty Perpetuating Tool**

Critics of microcredit i.e. whether it is a means of poverty alleviation tool or a profit making tool can be diluted by establishing the accountability of the operations of microcredit (Hollis, 1998). Whenever or wherever it works, either in a rural area or in an urban area, the primacy of the poverty reduction goal is to be given priority. There must be a consensus among the world leaders and donor agencies to prioritize poverty reduction in channeling funds for the developing country. Study reveals that MFIs for-profit making, poverty reduction is a consequence of the integration into the market economy and for which business motives are paramount (Drake, 2002). The emergence of these issues whether weaken the consequential dimension of microfinance or not- that may be a big question. Even for such institutions, poverty reduction still provides the impetus. Moreover, poverty reduction is the goal that gives legitimacy to the movement in the eyes of policy makers, funding agencies, multilateral organizations and the general public (yearofmicrocredit, 2005). And finally, it is definitely not different from any other

business<sup>6</sup>-it is a business for reducing poverty, it is a business for empowering the poor, it is a business of empowering the women, it is a business of eliminating social exclusion. All should do such business, if it is for having a just, purposeful society.

### 1.2.7 MC Governance vs. MRA Role

Recently the Microcredit Regulatory Authority (MRA) of Bangladesh announced that MFIs will have to limit the interest rates they charge clients to a flat 15 percent or an effective rate of 30 percent. According to an MRA official the move is an interim measure, and that the MRA will announce a final interest rate policy for MFIs after “conducting an in-depth study.” In addition to the limits on interest rates, the MRA announced that MFIs cannot collect deposits totaling more than 80 percent of their total outstanding loan portfolio, in order to prevent financial fraud. Moreover, according to a senior MRA official, MFIs will be empowered to purchase any fixed asset on the basis of the executive committee’s approval instead of the board of director’s consent. The MRA also asked that NGOs offering microfinance should separate their microfinance activities from other business activities; otherwise all of their business activities will fall under the monitoring and supervision of the MRA.

Data from MRA, as on 30 March 2009 reveals that out of 4,240 applicants 411 got the license to operate MC. The criteria for getting license from MRA are to cover 1000 members and outstanding loans of Tk. 40 lakh which may inspire to degrade the issue of ethics. The role for the MRA should be as the parent of the MFIs which will not restrict the access of the MC in the name of control and regulation; rather it will work as a promoter or negotiator of MC. The MRA should emphasis on the parity of horizontal and vertical growth of MC throughout the country so that development can take place without any discrimination (Zeller and Johannson, 2006).

Moreover, other issues like the access to soft loan vs. sustainability or, can MC reach the ultra poor or not? (Miller, 2003) etc. has also got the momentum in developing standard code of ethics for operation of microcredit.

### 1.2.8 Issues of Ultra Poor and MFI’s Sustainability

There was a contradiction between the imperative for high recovery rates and certain

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<sup>6</sup> Transform microfinance from a successful, but small, cottage industry to a powerhouse able to lift hundreds of millions of people out of poverty.”One can glean a similar message from other presentations at this conference (<http://www.chicagogsb.edu/capideas/microfinance/overview.aspx>).



other values that microfinance aims to cherish (e.g. helping poor with dignity, reducing dependence upon informal moneylenders). Though, in theory, this contradiction has not been resolved, in practice, it has been resolved in favor of recovery. For example, attempts have been made to recover loans at the expense of the loss of “honor” of members and the system of small payments in installments has prevented members from investing in long-gestation projects and made them dependent upon informal lenders (Ramachandran and Swaminathan 2002). All three of these features of microfinance are consequentiality in outlook.

### **1.2.9 Standardization vs. Flexibility**

Microfinance is a highly disciplined program (Ramachandran and Swaminathan 2002). Over the years, its practices have become standardized through introduction of different forms and formats, methods, etc. This includes high level of client discipline i.e. regular attendance of group meetings, savings, high repayment rates, and institutional disciplines i.e. good accounts keeping, timely loan disbursement, infrequent policy changes, etc. Many of the clients are unlikely to follow such strict disciplines and thus they gradually lose interest to keep themselves in groups. Some organizations (the case of ASA may be considered) have thus undertaken a flexible way of dealing with the clients to keep their allegiance (may not be ethical) to the organization and may have become successful keeping align them with the universal code and standards. But many of the organizations like to go on with adherence to strict rules in spite of the absence of any prescribed ethical code of standards.

### **1.2.10 Mainstream vs. Specialized Evaluation**

It was apparent that the emerging approach to evaluation was answering a question more inclusive than simply a company’s willingness and ability to meet its financial obligations, and that mainstream evaluation differed substantially from specialized micro finance evaluation.

Although by 2000 all reports included an explicit judgment on creditworthiness, there was considerable pressure to assign letter grades. Others did so from the outset, but it was not until 2003 that MicroRate offered a “performance evaluation” expressed in a 10-grade Greek-letter scale. Other specialized raters use a more traditional evaluation scale to

grade MFI performance.<sup>7</sup> The most important difference between mainstream and specialized evaluation is that while commercial evaluations focus primarily on creditworthiness, specialized evaluations place much more weight on analyzing microfinance performance focusing qualitative aspects than quantitative aspects (Farrington, 2005).

The end users of mainstream and specialized evaluations also differ. Socially responsible investors, while naturally concerned with the likelihood that an MFI can fulfill its contractual obligations, also want answers to questions such as: “how good is this MFI at providing microfinance services?” and “if we lend money to this MFI, will it be effectively used?” These questions are currently answered by a performance evaluation.

### 1.2.11 Criticism against MC

Malcolm Harper (Harper, M., & Dichter, T. 2011) makes an attempt, in his forthcoming book, *What's Wrong with Microfinance?* To explore the inequities and problems of microfinance programs as they are currently designed.

Despite the good things, he believes, can be accomplished with microfinance, Harper thinks that many MFIs “demand that poor people,” most of them are women; comply with a “shoddy form of banking” that should be viewed as a short-term stopgap rather than a long-term strategy to fight poverty. While positive impacts of microfinance and rural lending programs are apparent, they are “temporary expedients” to the problems of poverty. “One thing we have to think about is that we should not promote that type of banking to poor people,” Harper said of the high-interest group lending model favored by many MFIs. Though Harper conceded that his attitude might be perceived as negative, his objective was “not to throw out the baby with the bathwater, but to clean out the bathwater.”

Harper laid out the case for microfinances shortcomings by citing stories of its impact on borrowers, society and the organizations involved. For borrowers, he said, the pressure to repay can lead to suicide in some cases. More often, microfinance can lead to a cycle of

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<sup>7</sup> The use of a Greek letter scale, as opposed to the traditional Latin, helps indicate at first glance that a microfinance performance evaluation is something other than a traditional evaluation of counterparty credit risk. See [www.microrate.com](http://www.microrate.com) for scale and definitions. Other specialized raters use grades and definitions, implying more direct comparability to those of mainstream raters beginning with their first evaluations: A+ to E in the case of Planet Evaluation ([www.planetevaluation.org](http://www.planetevaluation.org)); and AAA to E in the case of Microfinanza ([www.microfinanzaevaluation.com](http://www.microfinanzaevaluation.com)) and ACCION ([www.accion.org](http://www.accion.org)).

debt not unlike credit card debt in Western societies.

“Microfinance does not replace the moneylender,” Harper said. “Moneylenders are still alive and well around the world and, in fact, benefiting.”

Warning against donor dependence on microfinance as a poverty alleviation strategy, Harper stressed that other basic needs should be met before banking is introduced in the most impoverished locales. However, he feels that microfinance has become a donor-driven industry engendering “absurd expectations” that may not be taking the needs of the poorest into full account.

Harper also brought up concerns on the female-focused nature of most microfinance programs, the shortcomings of the widely used group-lending model, and the high interest rates charged by many MFIs. He discussed alternatives to the current paradigm, including the replication of successful individual-lending models used in institutions such as *Bank Rakyat Indonesia*. He also mentioned the commercial banks' growing involvement in microfinance, resulting in competitive interest rates and perhaps increasing efficient delivery of financial services to low-income people around the world.

Many countries are concerned about the impact of excessive interest rates, abusive lending practices, and over-indebtedness of poor borrowers. Quite a few players in the industry are now focusing on consumer protection issues. Typical consumer protection measures include disclosure requirements, rules and prohibitions related to lending practices, mechanisms for handling complaints or disputes, and consumer education.

For example, there has been much criticism of the high interest rates charged to borrowers. The real average portfolio yield cited by the sample of 704 microfinance institutions that voluntarily submitted reports to the *Micro Banking Bulletin* in 2006, was 22.3% annually. However, annual rates charged to clients are higher, as they also include local inflation and the bad debt expenses of the microfinance institution. Muhammad Yunus opined that microfinance institutions that charge more than 15% above their long-term operating costs should face penalties.

Dr Qazi Kholiquzzaman Ahmad, Chairman, Palli Karma-Sahayak Foundation (PKSF) said that only seven percent of micro-borrowers were able to rise above the poverty line.

Harper concluded, “Microfinance-like banking is not for the poorest, and it cannot help them. This is the major area which is still unknown: how to provide efficient programs to

the poorest people. I think the change that is needed here is for micro financiers to admit that they are not reaching the poorest.”

In the recent past, serious charges have emerged about microfinance borrowers taking on multiple loans and too much debt, coercive collection practices by microfinance staff, and even suicides among borrowers who were unable to meet their payments.

One of the key failures of microfinance is its limited outreach to remoter areas and poorer people in them, especially in Africa. NGOs that have worked in these areas mobilizing community groups with savings and credit activities have often produced poor financial performance and run the risk of making people poorer. Harper argues that this “bottom-up” strategy is necessary but can be improved. These groups often perform poorly because of their internal power dynamics and it is necessary to “institutionalize suspicion” by equipping groups with the means to hold powerful members accountable. While it is no doubt impossible to make these systems work perfectly, it is important to make them work better as they are key means through which poor people can access financial services that help them manage their livelihoods.

### **Crisis Cases of Microfinance**

The case of Bolivia shows during a state of chronic political emergency separated many microfinance organizations from their market and made it difficult for them to repay their loans.

The case of Andhra Pradesh threw up a number of issues relating to the functioning of the MFI model. Microcredit has been blamed for many suicides in India: aggressive lending by microcredit companies in Andhra Pradesh is said to have resulted in over 80 deaths in 2010. India's multi-billion dollar industry was on the brink of a mass default until all major banks in the country agreed to continue lending to microfinance firms.

The “microfinance industry” needs to practice more humility about what it has achieved (outside of Bangladesh it has not even scratched the surface of poverty, for example in Kenya less than 70,000 people out of an estimated 9–10 million poor people have access to microfinance) and deepen its understanding of the financial service needs of the poor people.

The commercial microfinance model is increasingly seen by the international development community as the most important poverty reduction and local development

strategy in both developing and transition countries. While accepting that the model probably generates some short-term poverty reduction outcomes, the short-run positive outcomes are possibly swamped by negative longer-run impacts and trajectories, particularly in terms of material support for de-industrialization and the destruction of social capital. Overall, the commercial microfinance model seems to have worked against most of the core triggers that lie behind sustainable local economic and social development, and thus it is unlikely to be a factor in achieving sustainable poverty reduction.

Most criticisms of microfinance have actually been criticisms of microcredit delivered in the absence of other microfinance services such as savings, remittances, payments and insurance.

There has also been criticism of micro lenders for not taking more responsibility for the working conditions of poor households, particularly when borrowers become quasi-wage laborers, selling crafts or agricultural produce through an organization controlled by the MFI. The desire of MFIs to help their borrowers diversify and increase their incomes has sparked this type of relationship in several countries, most notably Bangladesh, where hundreds of thousands of borrowers effectively work as wage laborers for the marketing subsidiaries of Grameen Bank or BRAC.

Other criticism was raised by the IPO (Initial Public Offering) of a Mexican MFI, Banco Compartamos, in 2007. As the company put its shares on Mexican Stock Exchange, it was able to generate very high profits that were achieved by rising interest rates on their micro-loans that at some point reached 86 percent per year. In July 2010 India's biggest MFI, SKS Microfinance, also went public. In both instances Muhammad Yunus publicly stated his disagreement, saying that the poor should be the only beneficiaries of microfinance. For example, BusinessWeek reported that some Mexicans are stumbling with terms of newly available funding.

NGO MFIs in Bangladesh face a number of problems. The noted are: increasing numbers of non-poor people as microfinance clients; high interest rates; a lack of a scientific basis for loan pricing; non-productive loan use (those who borrow do not necessarily use the money for the purposes stated on the papers); NGO MFIs generally not interested in giving medium- or long-term loans to clients; client satisfaction largely ignored; continued dominance of moneylenders in rural financial markets; and weak governance

and management, all of which continue to characterize most microfinance NGOs in Bangladesh.

### **1.2.12 Opportunity and Evolution for Microfinance**

The scale, profitability and capacity for innovation of some microfinance institutions create a platform to broaden the delivery of credit and to contribute to the economic development of many markets in developing countries. According to Jane Jacobs, the legendary critical thinker about urban planning, economics and the environment, such a brilliant financial innovation occurred in Bangladesh and other developing countries rather than in North America. American innovative development of new financial products is itself legendary but it is driven by lucrative financial incentives. The microfinance industry teaches that brilliant financial innovation can be created by individuals in developing countries with business instincts, but who are motivated primarily by the achievement of social returns.

Malcolm Harper (Harper, M., & Dichter, T. 2011) believes MFIs, even to high-risk borrowers in developing countries, are supposed to assist in accessing credit—often a source of income generation for poor families-without collateral.

### **1.2.13 Evidence for Reducing Poverty**

Some proponents of microfinance have asserted, without offering credible evidence, that microfinance has the power to single-handedly defeat poverty. This assertion has been the source of considerable criticism. Research on effectiveness of microfinance as a tool for economic development remains slim, in part owing to the difficulty in monitoring and measuring this impact. At the 2008 “Innovations for Poverty Action/Financial Access Initiative Microfinance Research” conference, economist Jonathan Morduch of New York University noted there are only one or two methodologically sound studies of microfinance’s impact.

Professor Dean Karlan of Yale University mentioned that whilst microcredit is not necessarily bad and can generate some positive benefits, despite some lenders charging interest rates between 40 and 60 percent, it is not the panacea that it is purported to be. He advocates rather than focusing strictly on microcredit giving citizens in poor countries access to rudimentary and cheap savings accounts.

To further the point stated by Prof Karlan, microfinancing begets the general tendency of

a small business initially supported on credit to gain profits with time and generate micro savings. In his latest study, Nicholas Donabet Kristof, the famous two time Pulitzer Prize winner, states that there is no evidence of any negative influence of microfinancing but countless examples of people now looking at the bigger picture and saving for better things have surfaced. The example of BancoSol (Bolivia), where the number of savers has grown to twice as much as the number of borrowers, further strengthens his theory.

Sociologist Jon Westover found that much of the evidence on the effectiveness of microfinance for alleviating poverty is based in anecdotal reports or case studies. He initially found over 100 articles on the subject, but included only the 6 which used enough quantitative data to be representative, and none of which employed rigorous methods such as randomized control trials similar to those reported by Innovations for Poverty Action and the M.I.T. Jameel Poverty Action Lab. One of these studies found that microfinance reduced poverty. Two others were unable to conclude that microfinance reduced poverty, although they attributed some positive effects to the program. Other studies concluded similarly, with surveys finding that a majority of participants feel better about finances with some feeling worse.

There are currently a few social interventions that have been combined with micro financing to increase awareness of HIV/AIDS. Microfinance has also been combined with business education and with other packages of health interventions. A project undertaken in Peru by Innovations for Poverty Action found that those borrowers randomly selected to receive financial training as part of their borrowing group meetings had higher profits, although there was not a reduction in “the proportion who reported having problems in their business.”

#### **1.2.14 Dimensions in MFI Evaluation**

As we know, microcredit is the collateral free financial service provision of small loans to very poor people through the financial intermediaries (MFIs) to generate income. The diversifications and dimensions, in terms of product, funding and lending methodology and targets and objectives of MC, do differ significantly with the traditional financial services (Hollis and Sweetman, 1998). The fact that MFIs tend not to operate in the same way as traditional banks do as there is grant or concessional loan with almost every MFI. But that does not mean that they are not interested in profitability and efficiency issues. However, existing tools to assess the performance of traditional banking institutions may

not be appropriate within this new context.

In comparison with conventional rating sector, there are too many agencies producing too small number of reports every year. The mixture of rating grades from different agencies seems a hotchpotch, making comparisons a difficult task. Acting this way, it is hard for rating agencies to acquire the necessary recognition from the industry. Some improvements are needed; for example, the development of common guidelines, and the homogenization of the meaning in rating grades.

#### **1.2.14.1 Variations in Classification of MFIs**

Institutionally microcredit is provided at two forms: direct providers (Like GB) and apex lenders. At present, the main direct providers are microfinance institutions (MFIs), which are basically non-governmental organizations (NGOs) labeled here as “MFI-NGOs,” Grameen Bank (GB), Palli Daridra Bimochon Foundation (PDBF), Rural Development Scheme (RDS) of Islami Bank Bangladesh Ltd (IBBL), among others. At the apex level, the two main players are Palli Karma–Shahayak Foundation (PKSF) and the banks.

MFIs are again classified based on funding methodology and funding sources. Within PKSF, MFIs are classified as PKSF and non-PKSF POs, BIPOOL, OOSA based on the funding sources and geographical coverage. But MRA, a recent major initiative to promote and regulate MC, is considering as MFI only those which have got a specific horizontal and vertical coverage.

Though the major practices of MC operations in Bangladesh are getting a uniform system by the guidance of PKSF, it varies with respect to the individual funding sources in terms of the lending methodology, duration, group size, reporting format, repayment structure, interest rate, etc. Moreover, there are a number of operational models working like ASA, BRAC Proshika and Grameen Bank model which differ significantly in terms of lending and operational methodology. This sort of difference is also prevailing in different countries based on their requirements. It depends on from which sources MFIs are getting fund. It is the target of PKSF to make the POs sustainable and shift the graduated members to the formal sector.



#### **1.2.14.2 Variations of Model in Channeling Fund for MC**

Early efforts to provide financial services to the poor tied those services to specific economic activity. For example, between the 1950s and 1970s, governments and donors focused on providing subsidized agricultural credit to small and marginal farmers, in the hope of raising productivity and incomes. The cause of intervention of NGOs and MFIs for the development of Bangladesh is similar, as mentioned earlier. To meet the gap between demand and supply, a lot of efforts in many forms have been made after the liberation of Bangladesh. After the success of GB as a pioneer and PKSF as an apex financing body, channeling fund for MC through partner organizations has got a shape though there are almost 45 percent got covered under this system. Apart from this, initiatives are taken by donors, bankers and private sector to meet the demand. During the 1990s micro-enterprise credit concentrated on providing loans to poor women to invest in small businesses, enabling them to generate and accumulate assets and raise household income and welfare. So channeling of funds for MC has got the following five forms.

Under form I, PKSF provides microfinance to its POs for on-lending to the beneficiaries. Under form II, banks provide financing directly to groups for on-lending to the micro entrepreneurs. Under form III, banks finance directly to groups for on-lending to micro entrepreneurs, with the intervention of NGOs as social mobilizers and facilitators. Under form IV, donors finance to the intermediaries for channeling it to the ultimate beneficiaries. Under form V, self finance to the intermediaries for channeling it to the ultimate beneficiaries.

#### **1.2.14.3 Variations of Fund Components of MC**

MFIs are using savings as a source of capital for loans (indeed functioning as collateral for lending). NGOs generally want to reduce member's access to savings in order to develop their capital base. On the other hand, open access to savings and other flexible savings facilities may well increase the net savings deposited. Voluntary savings will contribute to both borrowers and thus, MFIs sustainability.

Though the foreign aid to the microfinance sector has declined, there is no crisis as such

as a result of that. Most of the people involved and experts feel that the number of NGOs seeking foreign funds has increased as well and the per capita resources for the credit retailers have declined. Dependence on the donors for funding microcredit activities will be a non-sustainable strategy as most donors feel that the demand for microcredit is rising but fund allocation is either static or showing a declining trend. Obviously, the sector has to look for other sources of fund.

Other sources of fund will be in diversified savings and investment products both on offer to members and those addressing the credit retailers as a financial institution. Savings in particular need to be encouraged and numerous NGOs are already investing their time and efforts in this sector. A number of outfits are maintaining savings as high as 30 percent and many went up to 40 percent but as there is no uniform policy for interest rate and products offered, there are variations which may need standardization. The sector in general remains vulnerable to a number of factors including natural disasters. There is no strategic policy to counter disasters and other calamities. Since NGOs are wholly dependent upon foreign aid, the crisis is high and during the floods of 1998, many of them had to be closed down because the situation was physically and organizationally untenable.

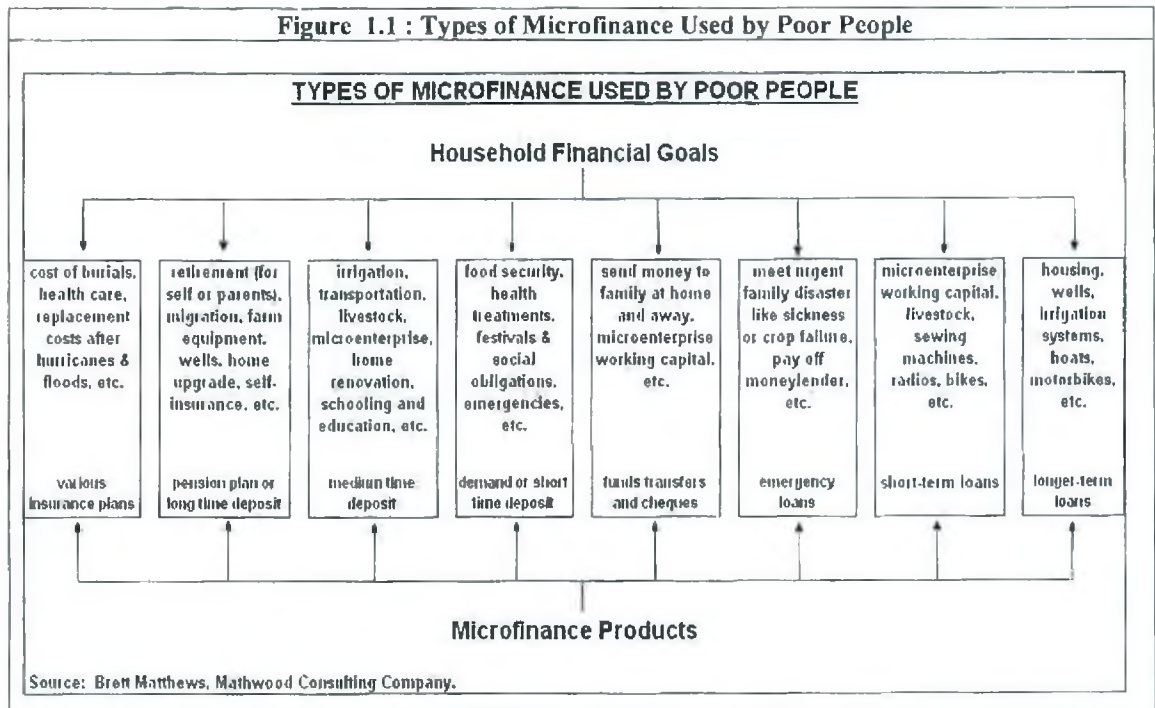
Alternative source of funding is not beyond the capacity of the sector to generate. Apart from savings and investment instruments, the sector can withdraw major investment from the financial houses such as banks and insurance companies who have surplus but not many opportunities. But MFIs will have to undertake confidence-building measures including a rating system based on performance. After the exploration on channeling MC fund, we find that three distinct linkage models are followed.

#### **1.2.14.4 Variations in Uses of MC by Poor People**

The MC use by the poor people has got the dimension in uses. Households use MC for various purposes such as insurance scheme, pension scheme, medium time deposit, short time deposit, transferring fund, emergency loan, short term loans, and long term loans.

Rotating Savings and Credit Association (ROSCA) is a group of individuals who agree to meet for a defined period of time in order to save and borrow together. "ROSCAs are the poor man's bank, where money is not idle for long but changes hands rapidly, satisfying both consumption and production needs."

Variously called *susus* in West Africa and the Caribbean, *tontines* in Cambodia, *wichin gye* in Korea, *arisen* in Indonesia, *likelembas* in the Democratic Republic of the Congo, *xitique* in Mozambique and *djanggis* in Cameroon, ROSCAs are informal or “pre-co-operative” microfinance groups that have been documented around the developing world.



**1.2.14.5 Variations in Institutional Framework**

Generalizing is a clash of methods. It abounds in microfinance, reflecting the values of the “owners” of MFIs and the organizations they create. A useful way of comparing contesting methods is to examine how they approach subsidy and its role in determining sustainability. The microfinance universe consists of three types of MFIs: for-profit institutions (Type I), NGOs (Type II) and cooperatives (Type III). Their missions are greatly different. Type I seek profit and want to make the financial sector more efficient. Subsidy is used for start up and network expansion. Type II wants to alleviate poverty by expanding services and enlisting more clients. Subsidy is considered essential to this mission. Type III promotes “affiliation” by recruiting members, offering more services, and forming more and different types of cooperative organizations. Goals include helping people and making markets more equitable and efficient. Subsidy is used whenever useful. Lots of things are just fine with microfinance. One thing that may be a little misunderstood is the nature of sustainability and the implications of different approaches to sustainability. To get the theme moving, the International Red Cross is not-for-profit.

Does this mean that it is not sustainable and should be abandoned? And the Salvation Army? It certainly has a profit motive, but is its existence likely to be threatened because it is dependent on charitable donations?

Most MFIs started as not-for-profit organizations like NGOs (non-governmental organizations), credit unions and other financial cooperatives, and state-owned development and postal savings banks. An increasing number of MFIs are now organized as for-profit entities, often because it is a requirement to obtaining a license from banking authorities to offer savings services. For-profit MFIs may be organized as non-bank financial institutions (NBFIs), commercial banks that specialize in microfinance, or microfinance departments of full-service banks.

Some MFIs provide non-financial products, such as business development or health services. Commercial and government-owned banks that offer microfinance services are frequently referred to as MFIs, even though only a portion of their assets may be committed to financial services to the poor.

Brigit Helms, in her book “Access for All: Building Inclusive Financial Systems,” distinguishes between four general categories of microfinance providers, and argues for a pro-active strategy of engagement with all of them to help them achieve the goals of the microfinance movement.

#### **(a) Informal Financial Service Providers**

These include moneylenders, pawnbrokers, savings collectors, money-guards, ROSCAs, ASCA<sup>8</sup>s and input supply shops. Because they know each other well and live in the same community, they understand each other’s financial circumstances and can offer very flexible, convenient and fast services. These services can also be costly and the choice of financial products may be limited and very short-term. Informal services that involve savings are also risky; many people lose their money.

#### **(b) Member-Owned Organizations**

These include self-help groups, credit unions, and a variety of hybrid organizations like “financial service associations” and CVECA<sup>9</sup>s. Like their informal cousins, they are

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<sup>8</sup> Association of Savings and Credit Association or ASCA is a group of individuals who agree to meet for defined period of time in order to save and borrow together.

<sup>9</sup> A CVECA is a self reliance savings and credit bank in Mali.

generally small and local, which means they have access to good knowledge about each others' financial circumstances and can offer convenience and flexibility. Since they are managed by poor people, their costs of operation are low. However, these providers may have little financial skill and can run into trouble when the economy turns down or their operations become too complex. Unless they are effectively regulated and supervised, they can be “captured” by one or two influential leaders and the members can lose their money.

### **(c) NGOs**

The Microcredit Summit Campaign counted 3,316 of these MFIs and NGOs lending to about 133 million clients by the end of 2006. Led by Grameen Bank and BRAC in Bangladesh, Prodem in Bolivia, and FINCA International, headquartered in Washington, DC, these NGOs have spread around the developing world in the past three decades; others, like the Gamelan Council, address larger regions. They have proven very innovative, pioneering banking techniques like solidarity lending, village banking and mobile banking that have overcome barriers to serving poor populations. However, with boards that don't necessarily represent either their capital or their customers, their governance structures can be fragile, and they can become overly dependent on external donors.

### **(d) Formal Financial Institutions**

In addition to commercial banks, these include state banks, agricultural development banks, savings banks, rural banks and non-bank financial institutions. They are regulated and supervised, offer a wider range of financial services, and control a branch network that can extend across the country and internationally. However, they have proved reluctant to adopt social missions, and due to their high costs of operation, they often cannot deliver services to poor or remote populations. The increasing use of alternative data in credit scoring, such as trade credit, is increasing commercial banks' interest in microfinance.

With appropriate regulation and supervision, each of these institutional types can bring leverage to solving the microfinance problem. For example, efforts are being made to link self-help groups to commercial banks, to network member-owned organizations together to achieve economies of scale and scope and to support efforts by commercial banks to “down-scale” by integrating mobile banking and e-payment technologies into their

extensive branch networks.

### **(c) MFIs Run by GOB**

There are several highly successful MFIs which are created by government by specialized act, such as Grameen Bank of Bangladesh, and Bank Rakyat of Indonesia. However, majority government led microfinance programs do a poor job of delivering retail credit. Such programs are usually subject to political influence, high default, continuing drain on national treasuries, and sometimes lending based more on the borrowers' influence than their actual qualifications. Among government programs reporting to international databases, only one eighth of the beneficiaries are being served sustainably. There are structural dynamics that make it hard for governments to deliver good retail credit. Sound credit administration requires screening out borrowers who are not likely to repay, charging interest rates high enough to cover costs, and responding vigorously to late payments. These requirements usually run counter to the practical incentives and imperatives of even the sincerest working politician. The government-run MFIs that deliver good microcredit tend to be insulated from politics, managed by technocrats, and strongly and explicitly focus on sustainability.

It is important to mention that these incentive problems for government providers pertain more to credit than to other services. For instance, good government savings banks are considerably easier to find than good government retail loan programs.

### **1.3 Challenges to Develop the Proposed Model**

A major problem with the rating of MFIs is to select the variables responsible for as there is no specific framework for that, so that statistical significance can be tested. The challenges of the study are to determine what aspects do matter with the rating of MFIs. Why the existing rating system for the formal sector is not suitable for this sector? Determining the accounting ratios which do matter in rating MFIs and relate them with the CAMEL components are also considered a big challenge for this work considering whether there is a significant relationship of the CAMEL components with the performance of an MFI. This is also a challenge to determine the weight for the variables to consider them for the five areas of CAMEL.

MC is in its peak. With its long way of reaching peak of its success in terms of its role in development, more than a dozen of MFIs rating system is developed throughout the

world. Study reveals that different rating agencies use different scales. They are difficult to compare, because those using the same grades not always assign the same meaning to the grades. The scales are very different, with their own definitions, and this way it is difficult to relate the scores assigned to MFIs by several raters.

#### **1.4 Problem Statement**

Taking these aspects into consideration, this study intends to develop a model for evaluating MFIs. MFIs are torn between their social mission (reaching the poor) and their financial objectives (covering the costs of the services offered). As a result, in order to continue their action in a long-lasting way, MFIs have to achieve financial sustainability, manage their costs as best as possible and become subsidy-independent. Moreover, the required change in scale of microfinance that will make it possible to serve the target public more widely—the number of people who could, in the long term, benefit from financial services and who are still excluded can be estimated at about a billion—relies, in the current trends, on the involvement of commercial banks and the reinforcement of private investment. So what will microfinance's social mission be?

In this regard, the proposed study incorporates both qualitative and quantitative techniques in its approach for the performance evaluation of the MFI depending on the dynamics of microcredit activities. However, finding out an effective way to combine its qualitative as well as quantitative aspects is critical, and developing a model for MFIs as well as for the microfinance industry is more critical. This study undertakes the project to identify standards for the assessment of the organizations of informal financial sectors, where MFIs are predominant concerns, can be replenished by the proposed model considering the typical properties of the informal sectors.

Identifying the variables and areas that matter in assessing MFIs from the view point of qualitative as well as quantitative aspects are considered challenging. However, combining of financial and nonfinancial (Qualitative), finding a basis for the calculation of weight for the ratios, selection of the areas, consideration of diversification and dimensions of MC and MFIs as a different breed of financial institutions, setting standard for the microcredit industry, and dilemmas of MC and way out from these are important matters in evaluation and also considered challenging.

The research questions of the study are: if these two aspects are combined in developing

a model for MFIs then what benefits will the regulating and funding agencies get? And how the proposed model can serve the purpose?

### **1.5 Rationale of the study**

To increase the confidence and credibility in the market, with the important stakeholders like public, issuers, investors, potential donors, funding, auditing agencies and regulators, the study will benefit immensely. As MFIs increasingly aspire to have access to formal financial markets for capital as well as to increase the outreach, the need for having an assessment framework to evaluate their performance is important. It can also increase the accessibility to formal commercial banks by mainstreaming the graduated and non PKSF MFIs (90%) to the formal sector from the informal funding sources which is considered important and challenging for its dimensions and vulnerability. Formal financial organizations are still struggling to monitor the activities of MC for lack of expertise and dimensions as needed to monitor closely for their different lending methodologies. Developing a model for financially viable and socially justifiable MFI for microcredit management can play a vital role for funding agencies as well as for the regulatory agencies to use it as an assessment tool that allows their affiliate institutions to reach the highest standards of performance.

Under the circumstances, the need for a unique and universal off site and periodical monitoring tool for the regulatory and funding agencies has become important since this industry is growing horizontally and vertically throughout the country as well as the criticisms are generating against MC. The criticisms include: Is microfinance really a step on the road to economic growth, or is it a short-term palliative, keeping poor people poor? Can an MFI really work if it embraces the “double bottom line” of both profit and social good? Is microfinance, especially credit, harmful, often leading the vulnerable poor in debt? Should microfinance be reaching the poorest? The involvement of some MFIs (like Proshika, GB) with politics and the recent experience of Andhra Pradesh of India, such as the issue of lack of transparency and of good governance, make these questions more valid.



## 1.6 Objectives of the Study

The prime objective of this study is to develop a model for MFIs and a universal grading system like CAMEL<sup>10</sup>, as used in the formal sector throughout the world, so that the concern stakeholders and funding agencies can use it to monitor, assess and finance.

Moreover, mainstreaming the graduated PKSf MFIs (like ASA) as well as non-PKSf MFIs to the formal sector is still a challenge as MC needs a different set up for monitoring and evaluation for its dimensions and uniqueness. In this context, rating of MFIs on the basis of financial capacity and strength and monitoring them from offsite by a universal instrument have become important to promote MC.

### Broad Objective

- Developing a model for MFIs to develop a uniform and universal evaluation system to promote MC.

### Specific Objectives

- To identify the variables and areas significant in evaluation of MFIs;
- To find whether the model can serve for this sector as a CAMEL serving for the formal financial sector.
- To set common performance standards for the industry;
- To develop a grading system for the overall as well as for the category;
- To prove that the mean of the identified variables for the categories will not be same for both quantitative and qualitative aspects;
- To discriminate the MFIs from the category and within category;
- To make possible to reduce and group the potential variables for both quantitative and qualitative aspects;
- To find the cutoff point to separate for both quantitative and qualitative aspects;
- To find whether MFIs to trade off between financial and social aspects;
- To find whether there is a positive correlation between the performance of quantitative and qualitative aspects;
- To find whether there is positive link between rating and performance evaluation;
- To verify whether the higher performing MFI has a greater access and acceptance to capital as well as to the donor and funder.

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<sup>10</sup> Based on the conceptual framework of the original CAMEL. North American bank regulators to evaluate the financial and managerial soundness of U.S. commercial lending institutions originally adopted the CAMEL methodology. The CAMEL reviews and rates five areas of financial and managerial performance: Capital Adequacy, Asset Quality, Management, Earnings, and Liquidity Management.

### 1.7 Scope and Limitations of the Study

This study covers most components for both quantitative and qualitative aspects. At the same time, this study will not go beyond the line of these two aspects to analyze the size of target market (scale), appropriate outreach in terms of loan size, and geographic location of clients and density of microfinance market or lending methodology. As for example, some academician as well as researchers of the microfinance industry have suggested that an “S” be added to this two aspects to measure “social impact,” what PKSF has just entertained so far by introducing the pilot project of “Enhancing Resources and Increasing Capacities of Poor Households Towards Elimination of their Poverty (ENRICH<sup>11</sup>)” and ‘Samridhi’ in Bengali term accepting the tradeoff between this two aspects. But this study concentrates on the quantitative and qualitative aspects and focusing on the sustainability and outreach.

As mentioned above, this study considers those variables that are key to accessing financial markets ensuring the corporate responsibility. In this context, the client coverage achieved by the institution, which is of extreme importance to institutions like PKSF and other apex organizations, is relevant for the development of the model for quantitative and qualitative aspects, that is, market share or economies of scale achieved. For example, if an MFI project to maintain market share while only minimally increasing the number of clients, it would not be considered under the evaluation system. From a social impact perspective, however, the sluggishness in client coverage would not be desirable. In other words, an MFI may receive a very high score given its overall quantitative and qualitative performance, despite the fact that its client coverage might be small and projected to grow only minimally. Again, average loan size is a recognized measure of an MFI’s effectiveness in reaching the microenterprise sector (as distinct from the small business sector). While a range exists within this average loan size measurement, this study does not account for where an MFI may fall within the range, and even it will not penalise an institution which average loan size is above this range.

Although micro entrepreneurs operate in both urban and rural settings, the majority of PKSF affiliates exclusively service urban micro entrepreneurs. The standard ranges used

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<sup>11</sup> PKSF has taken a bold initiative to launch a new comprehensive program focusing on integrated total household development for poverty alleviation in selected areas of the country. The innovative approach has been initially implemented in 21 unions across all seven divisions of the country, with one PO given the responsibility of one union.

by the model to evaluate an MFI's efficiency are based on urban micro lending where clients are usually densely clustered in marketplaces or neighbourhoods. The model does not make any adjustments for population density in a given market.

The model is neutral to the type of lending methodology used by the MFI. The same yardstick is applied regardless of whether the institution lends to individuals, solidarity groups, both individual and solidarity groups, and whether it applies the village banking methodology.

As the weighted scoring system is a mammoth job, to limit the scope, predominant indicators would be examined in only PKSF financing of the PO/MFIs. As most MFIs undertake both financial and non-financial services, the ratio analysis should also be different from formal banking institution. However, the non-financial services i.e. the social development activities of the MFIs bring no direct financial return to the institution; the assessment of such activities will by no way be done by this study.

### 1.8 Hypotheses

From the issues raised above and the problem stated, it can be said that the intention of the research is to come to a conclusion that the proposed model will serve the purpose of the microfinance industry in general as the CAMEL does for formal financial sector. Based on that challenges and study objectives, the hypotheses of the study are as follows:

- i) H<sup>o</sup>1: The mean of the identified variables for the categories will be same for both quantitative and qualitative aspects.  
H<sup>a</sup>1: The mean of the identified variables for the categories will not be same for both quantitative and qualitative aspects.
- ii) H<sup>o</sup>2: This is not possible to reduce and group the potential variables for both quantitative and qualitative aspects.  
H<sup>a</sup>2: This is possible to reduce and group the potential variables for both quantitative and qualitative aspects.
- iii) H<sup>o</sup>3: The cutoff point derived for the category will not separate the category for both quantitative and qualitative aspects.  
H<sup>a</sup>3: The cutoff point derived for the category will separate the category for both quantitative and qualitative aspects.

- iv) H<sup>o</sup>4: The model developed for quantitative aspects will not be representative.  
H<sup>a</sup>4: The model developed for quantitative aspects will be representative
- v) H<sup>o</sup>5: The model developed for qualitative aspects will not be representative.  
H<sup>a</sup>5: The model developed for qualitative aspects will be representative.
- vi) H<sup>o</sup>6: The grading system developed from the model will not be capable to grade the MFIs for both quantitative and qualitative aspects .  
H<sup>a</sup>6: The grading system developed from the model will be capable to grade the MFIs for both quantitative and qualitative aspects .
- vii) H<sup>o</sup>7: MFIs to trade off between financial and non-financial aspects.  
H<sup>a</sup>7: MFIs to trade off between financial and non-financial aspects.
- viii) H<sup>o</sup>8: There is no possitive correlation between the performance of quantitative and qualitative aspects.  
H<sup>a</sup>8: There is a possitive correlation between the performance of quantitative and qualitative aspects.
- ix) H<sup>o</sup>9: The model will not validiate for the real data.  
H<sup>a</sup>9: The model will validiate for the real data.
- x) H<sup>o</sup>10: The model will not serve for this sector as a CAMEL serving for the formal financial sector.  
H<sup>a</sup>10: The model will serve for this sector as a CAMEL serving for the formal financial sector.
- xi) H<sup>o</sup>11: There is no link between rating and performance evaluation.  
H<sup>a</sup>11: There is positive link between rating and performance evaluation.
- xii) H<sup>o</sup>12: The higher performing MFI has a greater access and acceptance to capital as well as to the donor and funder.  
H<sup>a</sup>12: The higher performing MFI has no greater access and acceptance to capital as well as to the donor and funder.

## CHAPTER TWO

### OVERVIEW OF MICRO FINANCE INSTITUTIONS EVALUATION

Microcredit is originated in Bangladesh in the form of cooperative in the early 1950s by BARD to protect the farmers from the traditional “mohajon” for the development of irrigation and agriculture. Later it was nursed, developed and tested by Dr. Mohammad Yunus and Grameen Bank in the late 1970s.

According to Von Pischke (2002), modern microcredit evolved from its origins in the mid 1970s to the present day from some organizations that offered loans and savings to individuals at the margins of the financial markets. Some examples of microcredit initiatives are: Grameen Bank in Bangladesh, now operating in more than 50 countries. FINCA and ACCION International, two US organizations whose area of activity is Latin America; and the rural units of Bank Rakyat Indonesia (BRI), one of the few institutions that receives no subsidies.

But in the early 1990s the evaluation of microfinance institutions (MFIs) was hardly more than an idea. The concept grew, and over the years it has gained increasing attention from a wide variety of market participants. Why has evaluation for microfinance come to be? How has it developed to where it is today? How might it evolve in the future?

#### 2.1 The Evolution of MFIs Evaluation

The idea of evaluation for MFIs emerged in 1996 as a result of a pilot study for MicroRate (Farrington, 2005). The term “evaluation” is used in this study as shorthand for credit evaluation. In this sense, an evaluation can be of an issuer (the company itself) or of an issue (the debt security). An issuer evaluation is an opinion of capacity and willingness to meet the financial commitments. An evaluation of an issue is an opinion of the creditworthiness of the specific financial obligation. Specialized evaluation for microfinance institutions very closely resembles the combination of both, as it does not go with mere payment capacity to capture the aspects of institutional performance, particularly to microfinance.

Corporate credit evaluation had its origins in the first rail-bond evaluations of John Moody, who started Moody’s Investors Service in 1900. Today not only a credit evaluation is necessary for access to capital but also a key determinant of the price of

funding for many companies in developed capital markets. In most countries credit evaluations have weight for regulators as well as for the capital markets, and banking supervisors often require them to determine such things as deposit insurance and minimum capital requirements.

## 2.2 Evaluation of MC and MFIs

How can we assess an MFI? How should we compare MFIs? How far is existing knowledge on traditional financial institutions appropriate in order to understand the behavior of MFIs?

Microcredit emerges as a new approach to fight poverty. So, is the poverty by MFIs efficiently addressed? There is a large body of literature on bank failure, but very little on microfinance institutions evaluation. Should we evaluate microfinance institutions the way banks do? Morduch (1999) observes that discussions on microcredit performance almost ignore financial matters.

These experiments resulted in the emergence of Micro-finance Institutions (MFIs), specialized financial institutions that serve the poor. MFIs are called "micro" because of the small size of their transactions and "finance" because they provide safe and reliable financial services to the poor.

The fact that MFIs tend not to operate in the same way as traditional banks does not mean that they are not interested in profitability and sustainability issues. However, existing tools to assess the performance of traditional banking institutions may not be appropriate within this new context.

Yaron (1994) suggested a framework, based on the dual concepts of outreach and sustainability, which has become popular in the assessment of MFIs performance (Navajas *et al.* 2000, Schreiner and Yaron 2001). Outreach accounts for the number of clients serviced and the quality of the products provided. Sustainability implies that the institution generates enough income to at least repay the opportunity cost of all inputs and assets (Chaves and González-Vega 1996). It is difficult to think of a sustainable MFI with poor financial management (Johnson and Rogaly 1997). Sustainability has two levels: operational and financial (see, for example, CGAP, 2003).

Microfinance industry evolution stresses more and more the importance of financial

viability. A set of performance indicators has developed, and many of them have become standardized, but there is by no means general agreement on how to define and calculate them. A consensus group composed of microfinance rating agencies, donors, multilateral banks and private voluntary organizations agreed in 2003 on some guidelines on definitions of financial terms, ratios and adjustments for microfinance (CGAP 2003). The ratios fall into four categories: sustainability/profitability, asset/liability management, portfolio quality, and efficiency/productivity. These measures derive from the financial ratio analysis implemented in conventional financial institutions.

The microfinance sector is at a crossroads. MFIs have shown their capacity to sustainably offer diversified, adapted financial services (small amounts, regular reimbursements, targeting of poor household activities, direct contacts with local credit agents, etc.) to those excluded from conventional banking systems. They have conceived nontraditional guarantees and developed systems based on solidarity, proximity and participation to increase trust and lessen informational and social barriers between the clients and the institution. The beneficiaries appreciate those services and generally reimburse their loans well.

However, the evaluation systems used up until now in the microfinance sector have essentially been focused on assessing financial performance. Moreover, information concerning the social performance of MFIs has been fairly rare or subject to discussion as shown by the debates on impact studies (CERISE<sup>1</sup> 2003).

The idea that microfinance actions can no longer simply be guided and evaluated with the measuring stick for financial performance has slowly but surely made its way in the microfinance sector following the observation of divergence and crises such as the over indebtedness of clients or the negative effects on the social bonds in the operation of certain so-called “joint-liability” groups. In this context, various initiatives have undertaken since the early years of the twenty-first century, emphasizing the importance for the development and sustainability of microfinance institutions, social objectives and their enhancement. This still remains to be demonstrated with adequate assessment approaches and guidance tools.

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<sup>1</sup> CERISE (Comité d'Echanges de Réflexion et d'Information sur les Systèmes d'Épargne-crédit) is a knowledge exchange network for microfinance practitioners.

### 2.3 Evaluation of MFIs does what?

It has long been argued that commercial banks have not provided for the credit needs of relatively poor people who are not in a condition to offer loan guarantees but who have feasible and promising investment ideas that can result in profitable ventures (Hollis 1998). Meeting this need is of interest to governments, charitable institutions, and socially responsible investors. New financial institutions have emerged that are in touch with the local community, that can obtain information about the loan taker at low cost, and that often are not only interested in profit but also in the creation of jobs, women employment, development, and green issues. These new financial intermediaries, the MFIs, provide small loans to poor people who can offer little or no collateral assets. But the provision of such microcredit is not limited to not-for-profit organizations. Traditional financial institutions can, and often do, make loans to the deprived as part of a socially responsible investment policy.

Over the last two decades, there is a tremendous development of communication as well as MC and in the modalities of the operation of business take place. To cope with the situation the MFIs are also transforming and adjusting their mode of operation with the automation. This sort of changes takes place especially in the case of reporting, offsite monitoring. Variations in types of rating system in different countries are responsible for creating a tremendous chaos in evaluation, funding and rating of this organization. In the case of auditing, there is still an absence of unique ratios and standards for this industry.

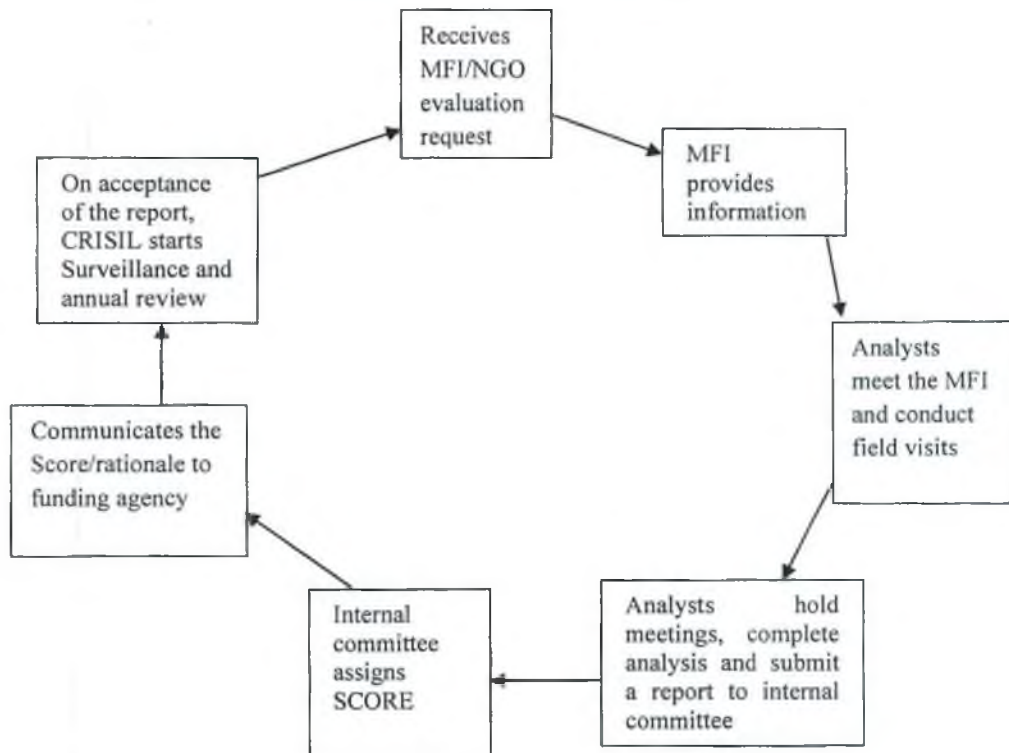
Moreover, for diversification and dimensions, as mentioned earlier, in terms of targets and objectives, demand of donors, investors as well as the MFI supervisors and practitioners in the context of deepening of outreach of MC vertically and horizontally throughout the world and the issue of sustainability related with that are the major causes for a different set of uniform rating system for MFIs. It is the limitation of the existing rating system for the formal and informal system that none of the rating system initiated to measure the complete performance of any organization which (Kaplan 1996) referred as BSC (Balanced Score Card) to cope with the age of technology. This work is also out of that limitation.

Rating of MFIs indicates grading of MFIs in terms of the areas to be identified with context of different hybrid of financial services like capacity, outreach, efficiency and



productivity. Evaluation of MFIs is not mere a report card which will just indicate the position in the industry. How can we assess an MFI? How should we compare MFIs? How far is existing knowledge on traditional financial institutions appropriate in order to understand the behavior of MFIs?

Figure 2.1: Evaluation Process



## 2.4 Unique Features of MC

### a) Vulnerability of MC Clients

Typical microfinance clients are poor and low-income people who do not have access to other formal financial institutions. Microfinance clients are usually self-employed, household-based entrepreneurs. Their diverse “microenterprises” include small retail shops, street vending, artisanal manufacture, and service provision. In rural areas, micro entrepreneurs often have small income-generating activities such as food processing and trade; some but far from all are farmers.

Hard data on the poverty status of clients is limited, but tends to suggest that most microfinance clients fall near the poverty line, both above and below. Households in the poorest 10% of the population, including the destitute, are not traditional microcredit clients because they lack stable cash flows to repay loans. Most clients below the poverty

line are in the upper half of the poor. It is clear, however, that some MFIs can serve clients at the higher end of the bottom half. Women often comprise the majority of clients.

Over the past decade, a few MFIs have started developing a range of products to meet the needs of other clients, including pensioners and salaried workers. Although little is known about the universe of potential clients, the number of households without effective access to financial services is enormous.

#### **b) Sustainability of MC and MFIs**

In 2009, 44 percent of all micro borrowers captured by the MIX database were served by profitable institutions. If one narrows the focus private MFIs such as NGOs and licensed institutions, one can see more than three fifth of the borrowers are already served profitably, and the long term trend is upward.

MFIs are on average less profitable than banks, but this is mainly because MFIs are not yet as fully leveraged as banks i.e., MFIs fund their assets with more of their own money and less of the money deposited by savers. Even so, well-managed microfinance has already shown to be profitable enough to integrate into mainstream financial sectors.

From development perspective, financial sustainability is not an end in itself. Rather, it is a tool for reaching the maximum number of clients. MFIs may only operate for a limited time, reach a limited number of clients, or be driven more by political goals than by client needs if services are not priced at sustainable levels.

Donors and governments cannot likely provide enough subsidized funds to meet the huge demand for microfinance. Even if there were enough donor and government money, it would be better spent on other development priorities that, unlike microfinance, cannot be delivered without continuing subsidies. Sustainable MFIs have the potential to attract non-subsidized resources to finance expansion of outreach. Experience has shown that borrowers are more likely to repay lenders who operate without subsidies as they are more confident that the institution will be around to give them future loans.

The microcredit approach has tried to avoid the pitfalls of an earlier generation of targeted development lending. The approach focuses on fostering better repayment discipline and charging interest rates that cover the costs of credit delivery, both of which support development of sustainable institutions that can continue to expand their services in the

future.

### **c) Uses of MC**

Most microcredit borrowers have microenterprises—unsalaried, informal income-generating activities. However, microloans may not predominantly be used to start or finance microenterprises. Scattered research suggests that only half or less of loan proceeds are used for business purposes. The remainder supports a wide range of household cash management needs, including stabilizing consumption and spreading out large, lumpy cash needs like education fees, medical expenses, or lifecycle events such as wedding and funerals.

### **d) High Interest Rate Charged to the Clients**

Concerns often arise as to why microcredit interest rates are higher than the bank interest rates that wealthier people pay. The issue is cost: the administrative cost of making tiny loans is much higher in percentage terms than the cost of making a large loan. It takes less staff time to make a single loan of Tk.10,00,000 than the 10,000 loans of Tk.100 each. Besides loan size, other factors can make microcredit more expensive to deliver. Credit decisions for borrowers, who have neither collateral nor a salary, cannot be based on automated scoring. These decisions require substantial intervention of a loan officer in judging the risk of each loan. MFIs may operate in areas those are in remote areas or have low population density, making lending more expensive. This is why traditional banks often tend to stay away from such areas. If an MFI wants to operate sustainably, it has to price its loans high enough to cover all its costs.

Although microcredit interest rates can be legitimately high, inefficient operations can make them higher than necessary. As the microcredit market matures in a given country, administrative costs usually drop as managers learn from experience and in some cases because competition forces lower pricing and greater efficiency.

Other than these, MC is also characterized by some other features such as lending policy, repayment policy, vulnerability etc. which made it different hybrid as financial product.

## 2.5 How MC and Savings Help the Poor?

The impact of microcredit has been studied more than the impact of other forms of microfinance. Microcredit can provide a range of benefits that poor households highly value including long-term increases in income and consumption. A harsh aspect of poverty is that income is often irregular and un dependable. Access to credit helps the poor to smooth cash flows and avoid periods when access to food, clothing, shelter, or education is lost. Credit can make it easier to manage shocks like sickness of a wage earner, theft, or natural disasters. The poor use credit to build assets, such as buying land, which give them future security. Women participants in microcredit programs often experience important self-empowerment.

Conducting empirical studies on the impact of credit is difficult as well as expensive and poses special methodological problems. Most impact studies to date have found significant benefits from microcredit. However, only a few studies have made serious efforts to compensate for the methodological challenges. In fact, many studies would not be regarded as meaningful by most professional econometricians. A new wave of randomized trial studies is now in process, which should yield a more definitive picture.

There is a strong indication from borrowers that microcredit improves their lives. They faithfully repay their loans even when the only compelling reason is to ensure continued access to the service in the future. Other microfinance services like savings, insurance, and money transfers have developed recently, and there is less empirical research on their impact. Client demand indicates that poor people value such services. MFIs that offer good voluntary savings services usually attract far more savers than borrowers.

Savings has been called the “forgotten half of microfinance.” Most poor people now use informal mechanisms to save because they lack access to good formal deposit service. They may tuck cash under the mattress; buy animals or jewelry that can be sold off later, or stockpile inventory or building materials. These savings methods tend to be risky—cash can be stolen, animals can get sick, and neighbors can run off. Often they are illiquid as well—one cannot sell just the cow’s leg when one needs a small amount of cash. Poor people want secure, convenient deposit services that allow for small balances and easy access to funds. MFIs that offer good savings services usually attract far more savers than borrowers.

## 2.6 PKSF and MC Context in Bangladesh

It has been 20 years since PKSF embarked upon the journey to effectively contribute to development through employment generation. Established by the Government of Bangladesh in 1990, the apex organization has moved beyond the initial scope of bringing access to finance to the rural poor and the underprivileged of the society. PKSF has gained in-depth understanding and valuable experiences over the last two decades, which resulted in better program design and implementation. In addition, the noteworthy achievement has been the progressive effort in developing non-financial programs that address the varied dimensions of development needs of the poor.

PKSF has progressed to a new era of development by establishing a total household development strategy, which encompasses the development programs that address major social issues such as health and education among the poor. Capacity building initiatives and market linkage and development have become an intrinsic part of PKSF development programs. Working towards a total household development has become the central basis of PKSF commitment.

PKSF's strength resides in its extensive and widespread microfinance institutions (MFIs), better known as Partner Organizations (POs), giving it access to all districts and sub-districts across Bangladesh. As of June 2010, PKSF had 262 POs providing development services that have grown in width as well as in breadth. PKSF has disbursed a sum of BDT 55,157 crore (US \$8.46 billion) to about 9 million beneficiaries through its 262 POs with a record credit recovery rate of over 98 percent. PKSF's POs include cooperatives, voluntary agencies, and non-government, semi-government and government organizations.

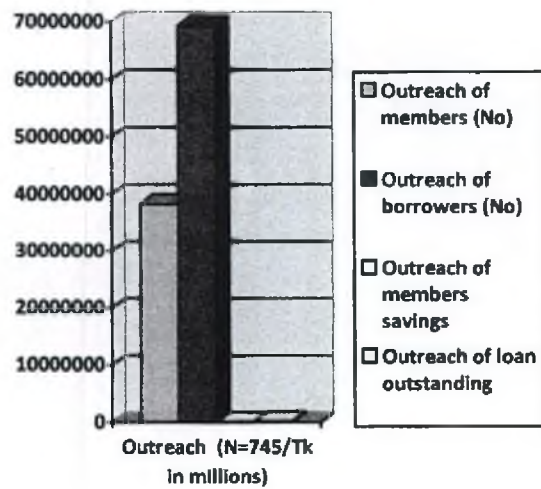
### (a) Loan Disbursement

Loan disbursement has grown steadily in the last two decades. As can be seen in Table 2.1, in FY 2009, loan disbursement grew by 24.41 percent to BDT 17.90 billion. Whereas, POs on-lending to members has grown tremendously with growth spikes in the FY 2002 and 2006. Today disbursement by POs has reached BDT 85.16 billion, a growth of 12 percent from the last financial year.

Indicators (N=745)	(Tk in millions)	Growth%
Disbursement of microfinance	1790034.56	24.41
Deepening of MC in relation to domestic	381047.54	14.73
Deepening of MC in relation to rural credit	381047.54	206.62
Deepening of MC in relation to agricultural GDP	381047.54	32.95
Micro savings as compared to rural deposits of bank	498145.72	19.46
Share of MC employment in labor force (No.)	361746	45.22
Outreach of MFI Branches (No.)	17777	4.23/14.18
Outreach(N=745)	Outreach (Tk in millions)	Growth%
Outreach of members (No.)	38288514	1.3/14.06
Outreach of borrowers (No.)	69292707	18.01
Outreach of members savings	96213.72	24.16
Outreach of loan outstanding	196545.90	9.03/30.04
Sources of fund (N=745)	Sources of Fund	Growth%
Members	126327.22	23.47
PKSF	38561.27	19.66
Donors	5210.48	16.95
Surplus	35,706.83	36.10
Own fund	16200.12	-12.80
Cumulative revolving Loan fund	268525.03	17.26

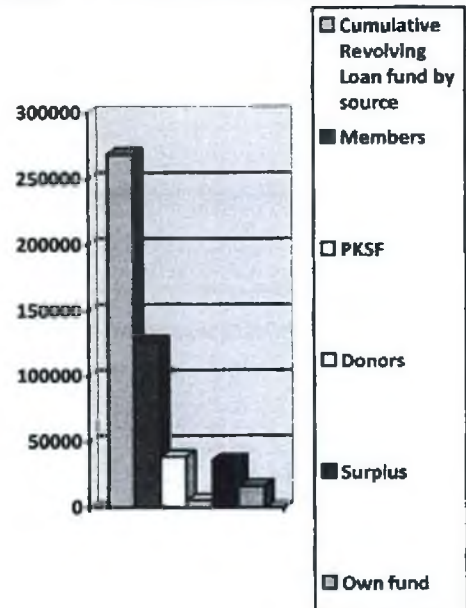
Source: Bangladesh Microfinance Statistics 2009.

**Figure 2.2: Outreach (N=745)**

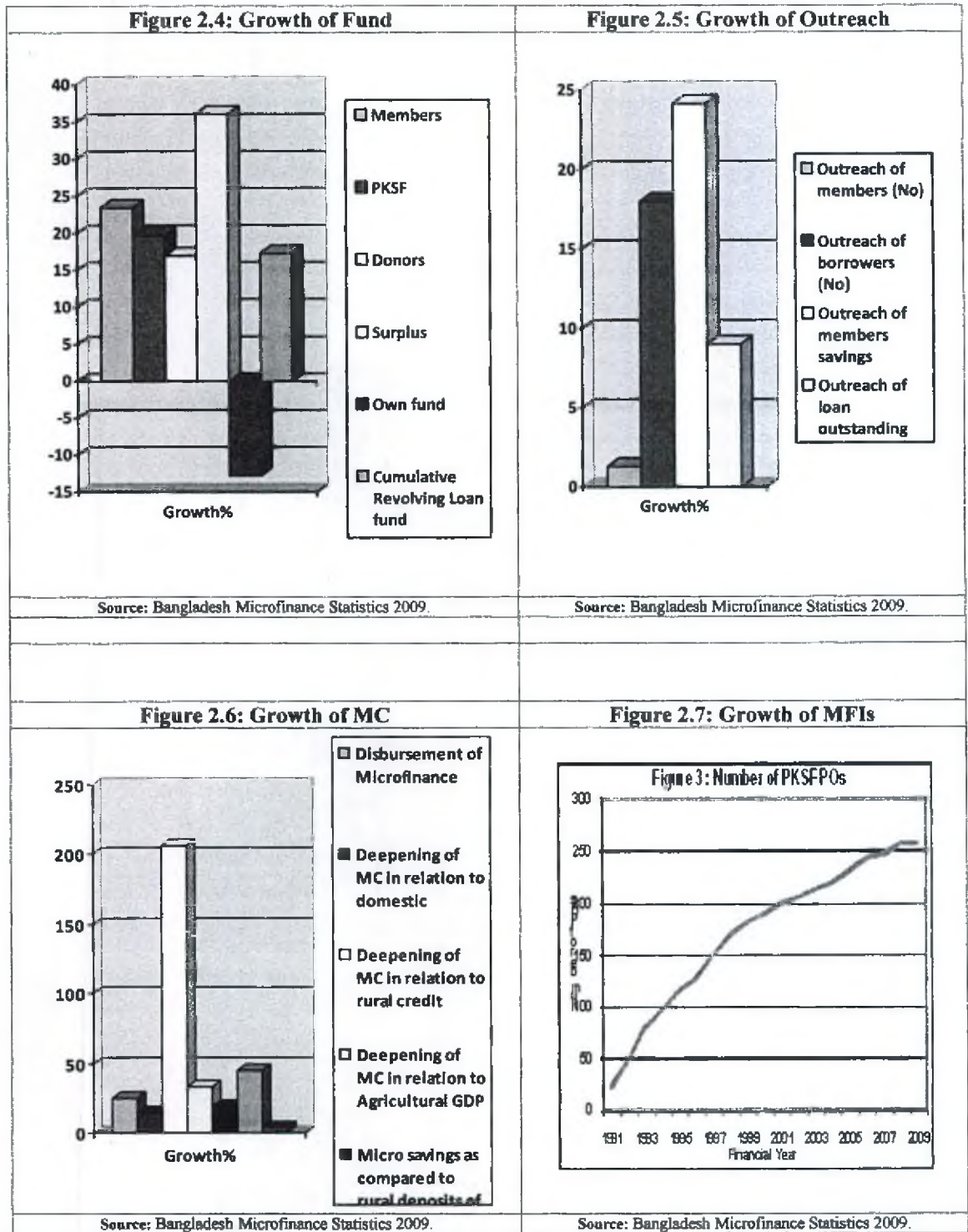


Source: Bangladesh Microfinance Statistics 2009.

**Figure 2.2: Sources of Fund (N=745)**



Source: Bangladesh Microfinance Statistics 2009.



Strength of PKSF's performance is demonstrated by the trend of disbursement of loan in the last two decade. PKSF disbursement has also grown steadily in the last two decades. PKSF POs network gives the apex organization an unparallel strength in implementing its various activities aimed at poverty alleviation through employment generation.

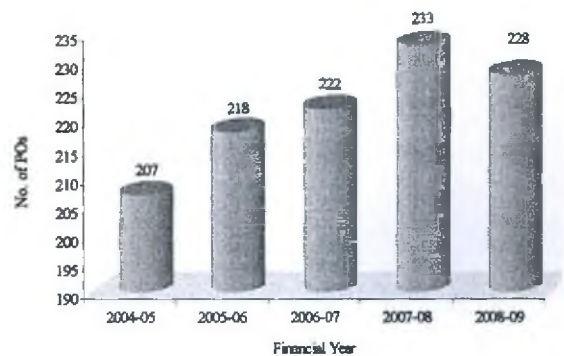
As shown in Figure 2.7, in FY 2009 PKSf had 257 POs, giving it access to all districts in the country. PKSf has been very focused on ensuring that strict procedures are followed for enrollment of new POs. It carries out due diligence and field level assessment, among other initiatives, to ascertain that potential organization becomes PKSf's PO.

**2.7 Growth of PKSf Microfinance Program during 2004-05 to 2008-09**

PKSf has its well-formulated prescribed criteria for selecting its POs to deliver microcredit to the poor. PKSf has now more than one PO in every district of the country.

In 2004-005, the number of POs was 207, which reached 228 in 2008-2009, recording a 10 per cent increase in the five-year period. Figure 2.8 shows the growth of POs of PKSf during the period, 2004-2005 to 2008-2009.

**Figure 2.8: Growth of POs of PKSf**

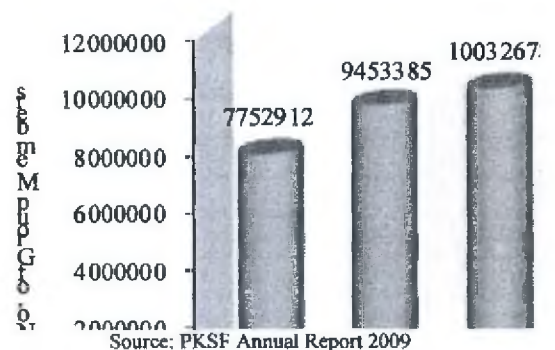


Source: PKSf Annual Report 2009

**a) Group Members**

PKSf POs organize the poor of various categories: poor, moderate poor and ultra poor, etc. under their microcredit programs. In 2004-2005, the number of members organized under the programs was 77,52,912, which reached 1,14,18,889 in 2008-2009. During the 2004-05 to 2008-09 period, the number of members registered a more than 47 per cent growth.

**Figure 2.9: Growth of Group Members**



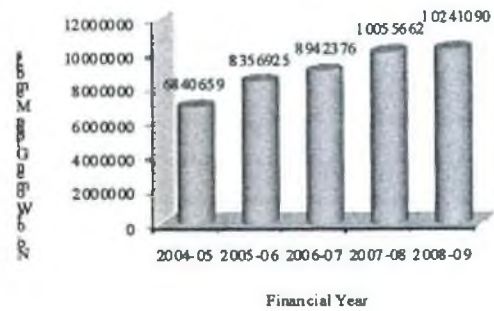
Source: PKSf Annual Report 2009



**b) Women Group Members**

PKSF attaches priority to women under its microcredit program towards mainstreaming them and also to empower them. The number of women in the FY 2004-2005 was 6840659, which reached 10241090 in the FY 2008-2009. Even though growth of women members was only 2 percent from the last FY, the five-year average growth is 11 percent. Figure 2.10 shows the growth of women group members of PKSF.

**Figure 2.10: Growth of Women Group Members**



Source: PKSF Annual Report 2009

**c) Borrowers**

In 2004-2005, the total number of microcredit borrowers under various programs and projects of PKSF was 55,22,406 and the number increased to 82,62,465 in 2008-2009. The number of borrowers in the five-year period, 2004-05 to 2008-09 recorded a 50 percent increase. Figure 2.11 shows the growth of borrowers of PKSF.

**Figure 2.11: Growth of Borrowers**

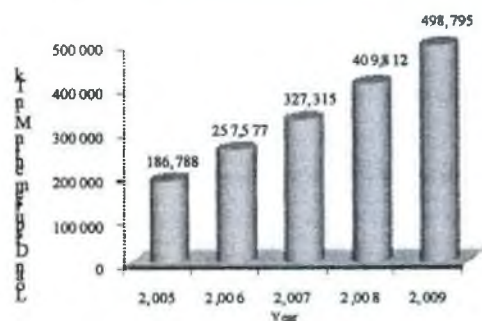


Source: PKSF Annual Report 2009

**d) Disbursement**

In 2005, the total disbursement of PKSF was Tk 186787.82 million, which rose to Tk 498795.05 million in 2009 recording a 67.03 percent growth in the five years period. The growth of total disbursement from the previous year, 2008 to 2009, was 21.71 percent.

**Figure 2.12: Growth of Disbursement**

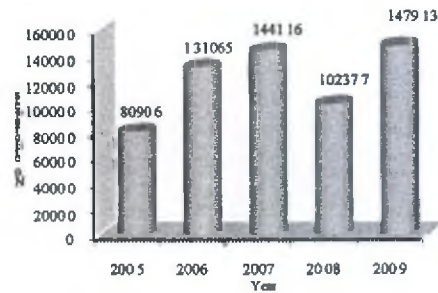


Source: PKSF Annual Report 2009

**e) ME Borrowers**

In 2005, the total number of borrowers under ME loan program was 80906, which rose to 147913 in 2009, recording a 82.82 percent growth in the five years' period. The growth of ME members from the previous year, 2008 to 2009, was 44.48 percent.

**Figure 2.13: Growth of ME Borrowers**



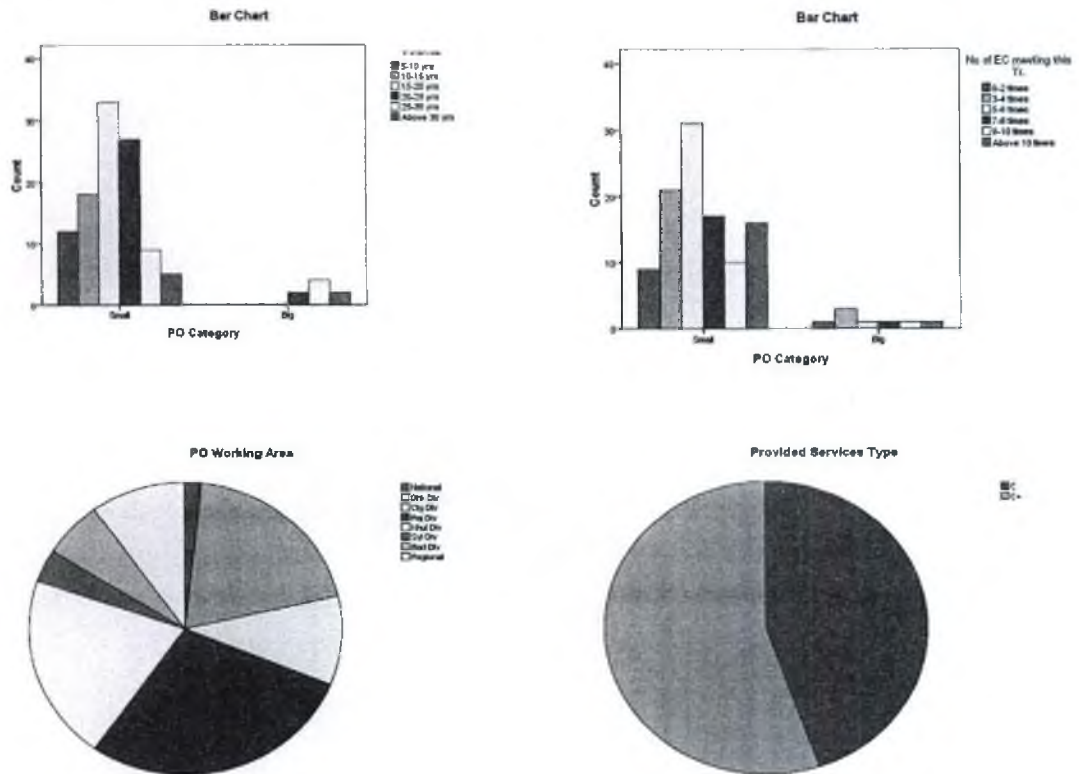
Source: PKSF Annual Report 2009

**Table 2.2: Group Statistics**

PO Category	Mean	Std. Deviation	Valid N (list wise)		
			Unweighted	Weighted	
Small	No. of Branches-PKSF	9.83	9.159	103	103
	No. of Samitees-M-P	52.91	122.125	103	103
	No. of Samitees-F-P	630.16	593.893	103	103
	No. of members-M-P	1164.42	2729.062	103	103
	No. of members-F-P	1.16E4	10656.498	103	103
	No. of borrowers-M-P	838.89	1784.223	103	103
	No. of borrowers-F-P	1.07E4	14683.814	103	103
	No. of staffs-Male	65.54	69.579	103	103
	No. of staffs-Female	24.17	41.266	103	103
	Amt.of Loan Outstanding-PKSF	7.21E7	7.244E7	103	103
Big	No. of Branches-PKSF	279.75	214.175	8	8
	No. of Samitees-M-P	580.62	607.319	8	8
	No. of Samitees-F-P	2.60E4	20107.937	8	8
	No. of members-M-P	7989.75	8197.971	8	8
	No. of members-F-P	6.73E5	742454.526	8	8
	No. of borrowers-M-P	4104.12	4998.575	8	8
	No. of borrowers-F-P	4.75E5	473073.783	8	8
	No. of staffs-Male	2062.38	1380.146	8	8
	No. of staffs-Female	5299.50	9919.621	8	8
	Amt.of Loan Outstanding-PKSF	2.21E9	1.424E9	8	8
Total	No. of Branches-PKSF	29.29	88.958	111	111
	No. of Samitees-M-P	90.95	236.843	111	111
	No. of Samitees-F-P	2455.85	8328.356	111	111
	No. of members-M-P	1656.33	3785.069	111	111
	No. of members-F-P	5.93E4	254442.519	111	111
	No. of borrowers-M-P	1074.23	2293.784	111	111
	No. of borrowers-F-P	4.42E4	170308.219	111	111
	No. of staffs-Male	209.46	628.325	111	111
	No. of staffs-Female	404.38	2853.312	111	111
	Amt.of Loan Outstanding-PKSF	2.26E8	6.656E8	111	111

Source: PKSF Annual Report 2009

Figure 2.14: PO by Category



PO Working Area

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid National	2	1.8	1.8	1.8
Dhk Div	22	19.6	19.6	21.4
Ctg Div	11	9.8	9.8	31.2
Raj Div	32	28.6	28.6	59.8
Khul Div	23	20.5	20.5	80.4
Syl Div	4	3.6	3.6	83.9
Bari Div	7	6.2	6.2	90.2
Regional	11	9.8	9.8	100.0
Total	112	100.0	100.0	

Source: PKSF Annual Report 2009

PO Category

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Small	104	92.9	92.9	92.9
Big	8	7.1	7.1	100.0
Total	112	100.0	100.0	

Provided Services Type

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid C	50	44.6	44.6	44.6
C+	62	55.4	55.4	100.0
Total	112	100.0	100.0	

## 2.8 Global Context of MC

Sam Daley-Harris, founder and director of the Microcredit Summit 2010, said “The technical side of microfinance is important, but only if it serves the transformational dimension... redemption that restores peoples’ honor and worth.” Grameen Bank, ASA, BRAC and PKSF implemented their operational model in more than 50 countries.

**Table 2.3 : Global Context of MC**

End of year	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2009
Total No. of MFIs	618	925	1065	1567	2186	2572	2931	3164	3133	3316	3552	3589
Total No. of Clients (in million)	13.5	20.9	23.6	30.7	54.9	67.6	80.8	92.2	113.3	133	154.8	190.1
Total No. of Poorest Clients (in million)	7.6	12.2	13.8	19.3	26.8	41.6	54.8	66.6	81.9	92.9	106.6	128.2

Source: MIX Market. (2010)

According to data published by Microfinance Information Exchange (MIX<sup>2</sup>), at the end of 2010 it has tracked 2,075 MFIs which were serving 92.6 million borrowers with a US\$ 52.6 billion in outstanding loans and 105 million savers (US\$ 32 billion in deposits) and an Avg. loan bal per borrower US\$ 588 (MIX Market 2010). Another sources counted approximately 665 million client accounts at over 3,000 institutions that are serving people who are poorer than those served by the commercial banks. Of these accounts, 120 million were with institutions normally understood to practice microfinance. Reflecting the diverse historical roots of the movement, however, they also included postal savings banks (318 million accounts), state agricultural and development banks (172 million accounts), financial cooperatives and credit unions (35 million accounts) and specialized rural banks (19 million accounts).

Regionally the highest concentration of these accounts was in India (188 million accounts representing 18 percent of the total national population). The lowest concentrations were in Latin American and the Caribbean (14 million accounts representing 3 percent of the total population) and Africa (27 million accounts representing 4 percent of the total population, with the highest rate of penetration in West Africa, and the highest growth rate in Eastern and Southern Africa). Considering that most bank clients in the developed world need several active accounts to keep their affairs in order, these figures indicate that the task the microfinance movement has set for itself is still very far from finished.

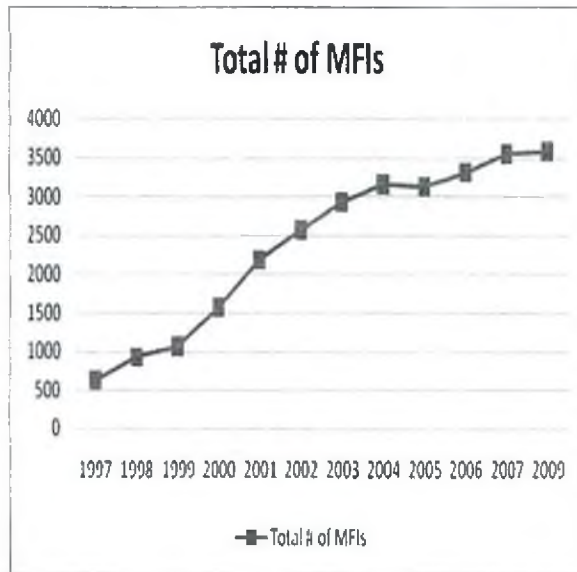
As yet there are no studies that indicate the scale or distribution of “informal” microfinance organizations like ROSCAs<sup>3</sup> and informal associations that help people

<sup>2</sup> The Microfinance Information Exchange, Inc. (MIX) is the leading provider of data, benchmarks and analysis for the microfinance industry. Dedicated to strengthening the microfinance sector by promoting transparency, MIX provides detailed financial, operational and social performance data on microfinance institutions, in addition to general business information on investors, networks and service providers associated with the industry. MIX does this through a variety of publicly available platforms, including MIX Market ([www.mixmarket.org](http://www.mixmarket.org)) and the Micro Banking Bulletin. MIX is a non-profit company founded by CGAP (the Consultative Group to Assist the Poorest) and sponsored by CGAP, the Citi Foundation, Deutsche Bank Americas Foundation, Omidyar Network, IFAD (International Fund for Agricultural Development), Bill & Melinda Gates Foundation, and others. MIX is a private corporation. Visit [www.themix.org](http://www.themix.org) for more information.

<sup>3</sup> ROSCA (Rotating Savings and Credit Association) is a group of individuals who agree to meet for defined period of time in order to save and borrow together.

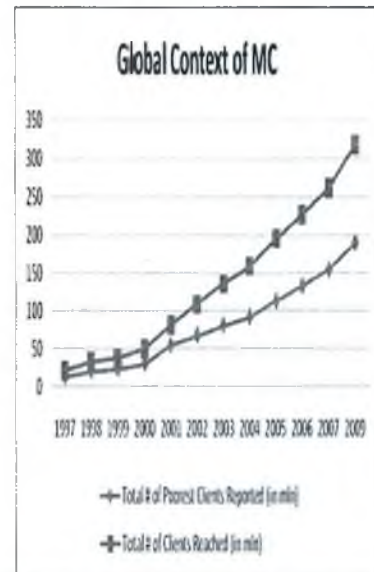
manage costs like wedding, funeral and sickness. Numerous case studies have been published, however, indicating that these organizations, which are generally designed and managed by poor people themselves with little outside help, operate in most countries in the developing world.

**Figure 2.15: Growth of MFIs Globally**



Source: Bangladesh Microfinance Statistics 2009

**Figure 2.16: Growth of Clients Globally**



Source: MC Summit Campaign Report 1997- 2009

### 2.9 Dilemma of Regulating or Promoting MFIs

One of the most important issues in microfinance today is the regulation and supervision of MFIs. As mentioned, most informal and semiformal organizations providing financial services to microenterprises do not fall under the government regulations that are applied to banks and other formal financial institutions. Many nonbank MFIs, especially NGOs, operate on the fringes of existing regulations, especially with regard to deposit mobilization. In some cases they do so with the knowledge of the authorities, who, for political reasons or simply for lack of time and resources, do not interfere. In other cases these nonbank MFIs simply avoid dealing with the issues and proceed with deposit mobilization by calling it something else. All parties involved in microfinance in a particular country need to understand the dynamic of these legally ambiguous operations. One important danger is that as more bank and nonbank MFIs are being operating, authorities who have been disposed to liberal interpretations of the regulations will be forced to invoke much stricter construction of the point of view of those engaged in microfinance.

Though MRA is now concentrating more on regulating than promoting MC by confining itself in issuing license for the MFIs, recently it has developed an interest structure which is a good initiative to practice for a universal rate for the MFIs working throughout the country.

## **2.10 Parentage of MRA**

It is helpful for both practitioners and donors to understand what are involved if and when an MFI becomes regulated so that they know how the MFI will be affected. Furthermore, if donors and practitioners are aware of the issues involved, they can potentially influence government decisions regarding regulation of the sector and propose self-regulatory measures.

Financial regulation refers to the body of principles, rules, standards, and compliance procedures that apply to financial institutions. Financial supervision involves the examination and monitoring of organizations for compliance with financial regulation.

Prudential regulation and supervision are designed to (Chaves & Gonzalez-Vega, 1996)

- Avoid a banking crisis and maintain the integrity of the payments system
- Protect depositors
- Encourage financial sector competition and efficiency.

### **Clarification on Interest Rate and Other Relevant Issues of Microcredit**

Microcredit Regulatory Authority (MRA) has recently issued certain guidelines (**Appendix-I**) on interest rate of microcredit. The following are the highlights:

1. Maximum interest chargeable set at 27 (twenty seven) percent per annum.
2. Calculation of interest on loans on a Declining Balance Method.
3. Minimum number of installments on general loans must be 50 (fifty).

It must be kept in mind that the financially disadvantaged client can only benefit from the loan if the client is able to generate enough profit to cover for the expenses spent on interest. Only then the client will be able to attain the objective of obtaining the loan.

It may be mentioned that many people are under the mistaken belief that it is not possible to operate profitably as a lender in the microcredit sector through bank borrowings at the existing rate of interest. In reality, the cost of fund for the microcredit sector is only 7 percent on average compared to 3-4 percent for the banking sector. It may be noted that the average amount of savings for the MFIs is 30 percent of the loans outstanding on

which only a maximum of 5 percent interest is paid. Furthermore, the Institutions have a large amount of retained earnings, the cost of which is zero. Hence, the cost of fund of the microfinance industry works out to 7 percent taking into consideration the zero cost of retained earnings, cheaper fund from savings along with the traditional cost of bank borrowing. Fixing the maximum chargeable interest rate at 27 percent would mean that the gross margin for the Institutions would be 20 percent which is still considered high. The margin is large enough to cater for increased overhead expenses and/or costlier borrowings from banks. Hence, it is possible to further reduce the rate of interest on loans offered by the microcredit institutions through reduced overhead costs, attaining operational efficiency, etc. MRA will continue to work to this end in future.

### **2.11 What is Still Left?**

To meet the requirements of PKSF, the POs need self-regulation mechanism for their smooth functioning and sound growth. It is admitted that effective self-regulation is one of the key elements in efficiently managing and ensuring viability of an institution. Along with this self-regulation, there has been a strongly felt need for overseeing the financial and program performance through an appropriate monitoring mechanism based on certain standards compatible with the PO activities unlike the conventional financial performance standards being used for formal banks and financial institutions. As most POs undertake both financial and non-financial services, the ratio analysis should also be different from formal banking institutions. However, the non-financial services i.e. the social development activities of the POs bring no direct financial return to the institution; the assessment of such activities could be made through impact studies.

There is a tremendous development of microfinance sector in recent years. In consideration of outreach and deepening of MC, it has got a visible development in comparison with important national sector such as domestic credit, rural credit and agricultural credit. Its contribution to national employment generation increased, and it helped a large number of poor in asset creation through savings mobilization. The outreach of MC has contributed to increase the institutional strength of the MFIs, mobilizing higher number of members and service them with credit which helped them to reduce the interest rate than ever before without decreasing the interest rate for savings. This is obviously a positive development against the criticism of MC.

## CHAPTER THREE

### LITERATURE REVIEW AND METHODOLOGY

#### 3.1 Literature Review in General

A number of researchers have developed statistical leading indicator models of banking problems. They seek to establish which indicators provide an early warning signal of either individual bank failure or a banking crisis. In using these models, three different approaches can be identified in the empirical literature, viz, Micro Approach, Macro Approach and Joint Approach. The Micro approach typically focuses on individual banks' balance sheet data, possibly augmented with market price data, to forecast the failure of individual institutions. The Macro approach uses macroeconomic variables as well as some institutional variables to explain and ultimately predict systemic bank crises. These studies typically focus on a large sample of countries, some of which are known to have had a banking crisis during a certain period. However, the major shortcoming of this approach is that, by not including individual bank data in the sample, it does not explain not all banks fail even if hit by the same macro shock. The Joint Approach combines the individual bank specific indicators and macroeconomic variables to assess financial vulnerability.

Exploration of theories of modelling for evaluating and assessing the formal and informal sector institutions will assist in developing a model for evaluating MFIs. Exploring academic databases for records on "business failure," "business distress" or "bankruptcy" yields a large body of studies on qualitative, empirical, theoretical and simulation aspects. It is a part of this research to distil from this large quantity of potentially relevant reports and methodologies which can assist in modeling for the evaluation of MFI. MFIs face a distinct challenge when trying to encourage prospective donors and financial markets to back their activities. Although the literature for the model for predicting bankruptcy for the formal financial sector is extensive, credible academic literature for evaluating MFIs, which has a research appeal and universal is narrow. But there are a good number of works done in this sector on the basis of "as required" and "learning by doing" by the practitioners. These tend to be expensive, and lack a common standard that cannot be applied universally and lack of research appeal. Most of the evaluations have not been made public, leaving the methodology and/or results unknown to other potentially interested parties. What is required for the evaluation system of MFIs that takes into account the issues of MC as well as the "sustainability and outreach," and



sends a clear signal to the regulators, donors and investors? The first part of the chapter provides us an exploratory analysis of the theories of financial models for the formal sector, with the aim of getting assistance for developing an appropriate model for the evaluation of MFIs, whereas the second part of the chapter provides us an exploratory analysis of the theories of financial models for the informal sector, with the aim of getting assistance for developing an appropriate model for the evaluation of MFIs for the dimension of MC.

During the late 1980s the failure rate in the banking sector was highest after the economic devastation of the 1930s. Study<sup>1</sup> found banking is deemed to be one of the most meticulously regulated and monitored sectors worldwide. This fact reflects upon the sway banks hold over the macro economy. Banks play an important role in the economy as savings institutions and as providers of credit and capital. Besides government supervision, deposit insurance and other regulatory conditions, capital requirements limit risks for depositors and other stake holders, and reduce insolvency and systemic risks. Excessive capital requirements induce credit crunch, whereas inadequate capital requirements lead to undesirable levels of systemic risk. With this backdrop, in 1988, the Basel<sup>2</sup> I Accord was introduced which proposed a uniform framework for the implementation of risk-based capital rules. However, this framework applied the same “risk weight” to various credit exposures, regardless of their creditworthiness. Consequently, the Basel Committee released the Basel II Accord<sup>3</sup> which aimed at making the capital requirements risk sensitive. Although capital adequacy is a necessary condition for ushering stability in the banking sector, it needs to be supplemented with a sound monitoring and supervisory framework for financial intermediaries. Central banks around the world have therefore started working towards strengthening prudential norms and enforcing transparency in financial reporting and accountability on the part of financial institutions to avert any future financial crisis. The best way for supervisors to track the condition of banks is to conduct frequent, periodic on-site examinations of banks. But examiners cannot be perpetually on-site at all banks which would be prohibitively expensive and, for most banks, unnecessary. As a result, supervisors also monitor bank condition off-site.

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<sup>1</sup> Modeling ‘Early Warning System’ For Off-Site Surveillance Of Commercial Banks Kulkarni National Institute of Bank Management, Pune-411 048, India. IBRC Athens 2005.

<sup>2</sup> Basel Committee on Banking Supervision, “International Convergence of Capital Measurement and Capital Standards,” Bank for International Settlements, Basel, Switzerland (July 1988).

<sup>3</sup> Basel Committee on Banking Supervision, “A New Capital Adequacy Framework,” Bank for International Settlements, Basel, Switzerland (June 1999).

To assess the accuracy of CAMEL<sup>4</sup> ratings in predicting failure, Rebel Cole and Jeffery<sup>5</sup> Gunther<sup>5</sup> use as a benchmark an offsite monitoring system based on publicly available accounting data. Their findings suggest that, if a bank has not been examined for more than two quarters, off-site monitoring systems usually provide a more accurate indication of survivability than its CAMEL rating.

Gilbert, Andrew, and Vaughan, (1999) examines the potential contribution to bank supervision of a model designed to predict which banks will have their supervisory ratings downgraded in future periods. Bank supervisors rely on various tools of off-site surveillance to track the condition of banks under their jurisdiction between on-site examinations, including econometric models.

Another related line of research study conducted by Ferri et al (2001) examines the behavior of issuer ratings in developing countries, and bank and corporate ratings appear to be strongly related in an asymmetric way with changes in sovereign ratings. Bongini et al. (2001) study the power of credit ratings to predict bank insolvency in East Africa countries.

The pioneer work in Bangladesh in this area, in the informal sector of rating MFIs, done by Kader (2001), selects the variables by using subjective judgment. Academic research on analyzing financial information issued from MFIs is still scarce. Gutiérrez-Nieto *et al.* (2006) studied financial efficiency from a sample of Latin-American MFIs, using the Data Envelopment Analysis technique. An overall ranking of MFIs was obtained in terms of how they make use of inputs and outputs. Such efficiency rankings can be used by MFIs to highlight their reliability to potential fund suppliers. One of the seminal studies using empirical data of MFIs rating is Hartarska (2005). She finds that external governance mechanisms such as auditing, rating and regulation have a limited impact on outreach and sustainability of microfinance institutions. More research and quality data are needed to ensure that strong organizations direct scarce resources to the

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<sup>4</sup> The CAMEL methodology was originally adopted by North American bank regulators to evaluate the financial and managerial soundness of U.S. commercial lending institutions. The CAMEL reviews and rates five areas of financial and managerial performance: Capital Adequacy, Asset Quality, Management, Earnings, and Liquidity Management.

<sup>5</sup> Of the 12,442 U.S. insured commercial banks possessing a call report for year-end 1989 and also meeting the other requirements of Rebel Cole and Jeffery Gunther study, they were able to obtain year-end 1989 CAMEL ratings for 12,198, or 98%. Of these 12,198 banks, 251 failed during the two-year period examined. Also, of the 12,198 banks, 7,912 were rated based on a "full scope" exam. The results reported here are qualitatively identical when the analysis is limited to "full scope" exams.

entrepreneurial poor. Moreover, Hakim (2001) has also done a good work on rating MFIs. CAMEL rating by Karim (2005) also enriched the author's research about the rating system of Bangladesh Bank.

### 3.2 Literature Review of Variable Selection

Hamer (1983) stated that variables for statistical modeling should be selected on the basis of minimizing the cost of data collection and maximizing the model applicability. Indeed, while Courtis (1978) identified 79 variables useful in predictive studies which were grouped into profitability ratios, managerial performance ratios and solvency ratios; it is impractical to use all of them in financial distress modeling. In practice, the variables used in business failure prediction literature are mainly a subset of financial ratios and occasionally include macroeconomic variables and other qualitative factors. A quick glance throughout various studies reveals that there is a lack of consistency regarding which variables should be used. This inconsistency is not surprising from a statistical point of view and there are a number of plausible reasons. Firstly, the variable selection for most studies is naturally limited by availability. Secondly, when there are many variables, it is usually preferable to reduce the number of variables by some kind of simplification procedure and it is well known that even a slight change in data can sometimes lead to a different set of variables being chosen. Lastly, many of the studies can be differentiated by the different industry and statistical methods they employ; therefore, the differences in variable selection are an expected phenomenon.

The variables discussed by Cole, Cornyn and Gunther (1995) are typical of those used in financial distress and bank failure models (See also Hooks 1995 and Demirgü-Kunt 1989). The issues of weight responsible for individual ratio for rating MFIs are nowhere found. There is no direct reference for that. But the logit model method used to calculate the weights takes advantage of the linear portion of the logit model. It should be noted that this method is closely related to a Taylor expansion of the logit model. Apart from the above academic works, there are some works done by the practitioners.

Dimitras, Zanakis and Zopunidis (1996) illustrated the above statements succinctly. In their paper, they investigated 47 studies from *Journal of Banking and Finance*, *Journal of Business Finance and Accounting*, *Journal of Accounting Research*, *Omega*, *Decision Sciences*, *Journal of Finance* and *European Journal of Operation Research* across 12 different countries (Australia, Canada, Finland, France, Greece, Israel, Italy, Japan,

Sweden, Holland, England and United States). While the most frequently used financial ratios are perceived to be working capital/total assets, total debt/total assets, current assets/current liabilities, earnings before interest and taxes/total asset and net income/total assets, as observed in Dimitras (1996) study, has no consistency between different studies. Other studies on business distress such as Tirapat and Nittayagasetwat (1999), Shah and Murtaza (2000) also used a subset of variables. Ooghe and Verbaere (1982) also use additional variables such as amounts payable within one year for sales and services rendered over current working assets which Stein and Ziegler (1984) use other variables such as transfer credits/credit turnover . In addition to financial ratios and their transformations such as taking logarithms, some study have also advocated the use of entropy from information theory. Pany (1979) used entropy analysis to examine the failed bank's financial volatility; Lev (1971) also found failed firms have higher entropy values. In Pany (1979), the entropy used to analyze the financial variables is defined giving emphasis on individual account balances for prior period as a percentage of total account balance and individual account balances for current period as a percentage of total account balance in a financial statement.

The concept of entropy is useful not only in providing additional measures to the volatility of financial performances, the general concept of entropy can also be applied in a different context such as in classification which was used in constructing an expert system in Messier and Hansen (1988).

There are also some studies in multi-criteria decision aid methods that advocate the inclusion of qualitative information such as quality of management, technical capacity, market share, social importance. These are often ignored in financial distress modeling, partly because of the difficulty of measuring these items objectivity and using financial ratios alone often gives quite a high success of rate of classification. The inclusion of the multi-criteria decision aid methods in this literature review is designed to show that there are methods which incorporate subjective information quite successfully and can predict financial distress with remarkable accuracy.

In all, the key message derived from all of these earlier studies is that the selection of the important variables is usually dependent on the data and it is necessary to apply sound statistical techniques to choose the appropriate variables that can give an adequate picture of the organizational financial health. This point is also reiterated in Balcaen and Ooghe

(2005). There are several approaches:

- Conduct a correlation analysis and remove highly correlated redundant variables from the correlation matrix.
- The stepwise approach involves removing the least significant results from regression analysis of the general unrestricted model in logit and probit models as discussed in Miller (1984). This does have potential problems as there is usually only one simplification path, so an omission of an important variable at the start of the process would cause the retaining of many other variables to proxy its role, resulting in a model that retains too many variables.
- The optimal regression approach tries almost every combination of variables to give a simpler model that has the least information loss from the full model. A discussion on this approach can be found in Coen, Gomme and Kendall (1969).
- The General to Specific (Gets) modeling (Hendry 1995, 2000, Hoover and Perez 1999, Hendry and Doornik 2001), was claimed by these authors to be a superior simplification regime than either stepwise approach or optimal regression approach since these methods do not check the congruence of reductions of the full model, resulting in unreliable inferences. The congruence here refers to no misspecifications of the statistical model. In this approach, the congruence of the original model is tested and this is maintained and checked throughout the selection process. The search strategies involved here requires consideration of different reduction paths and removal of either a block or a single variable to ensure the final model is the simplest congruent model possible. In the event of more than one model being identified, this approach will use encompassing tests<sup>6</sup> to resolve the choice. Hendry also demonstrated the accuracy of this approach through simulation and has refuted common statistical criticisms associated with p-value model reduction algorithm on his [www.pcgive.com](http://www.pcgive.com) website.
- Multivariate data reduction method, usually involves principal component analysis where a series of different linear combinations of financial ratios is constructed in such a way that the information loss of multivariate data is

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<sup>6</sup> Encompassing is an econometrics concept as explained in Hoover and Perez (1999), a model is said to encompass another if it conveys all the information conveyed by the other model. For example, consider a case where there is a general model G that uses all the unique variables of A and B and they all have the same dependent variable. If A is a valid restriction of the model G (e.g. based on the F test) and mode B is not, then model A encompasses model B and we know everything about model G from model A.

minimized (Johnson and Wichern 1982).

### 3.3 Literature Review on Weighting

This part of the study investigates the weighting systems containing multiple performance measures for the formal and informal financial sectors as there is little work done which have a research appeal with the informal sector though there are works done with the use of subjectivity. One critical implementation issue that arises in incorporating multiple performance measures in reward systems is determining the relative use of subjectivity to place on the various measures when determining ratios.

In Giovanni and Sylvain (2006) weights are computed from the correlation matrix of the chosen variables. Although Kaplan (1996, 2001) provide little guidance on how to combine or “balance” these disparate measures when evaluating managerial performance, they conjecture that the balanced scorecard renders subjective reward systems “easier and more defensible to administer...and also less susceptible to game playing” (Kaplan and Norton 1996).

Analytical research on the use of subjectivity in performance evaluation and compensation focuses on the benefits of subjective bonus awards (e.g., Baker *et al.* 1994, Baiman and Rajan 1995), the drawbacks of subjective performance evaluations (e.g., Prendergast and Topel 1996, MacLeod 2001), and the factors influencing the relative weights placed on subjective versus objective performance measures in incentive contracts (e.g., Murphy and Oyer 2001). Most of these models do not examine how different types of performance measures or different forms of subjectivity (i.e., flexibility in assigning weights to measures, use of qualitative performance evaluations, and/or discretion to incorporate other performance criteria) should be incorporated into subjective bonus awards. An exception is Murphy and Oyer’s (2001) model, which suggests that the relative weight on subjective measures will be higher in privately held companies, larger companies with more top managers, less autonomous business units, companies with substantial growth opportunities, and companies where accounting profits and shareholder returns are less highly correlated. Their cross-sectional empirical tests of executive bonuses provide mixed support for these hypotheses.

A related empirical study of automobile dealerships by Gibbs *et al.* (2002) finds that subjectivity (defined as the presence of any subjective bonus payout or as “discretionary

bonus'' as a percent of total compensation) is positively related to departmental interdependencies, financial losses, the manager's tenure, and the achievability of formula-based bonuses. While these two empirical studies provide insight into *who* uses subjectivity in compensation contracts, they provide little insight into *how* subjectivity is applied or performance is evaluated when multiple types of performance measures are incorporated into the bonus contract.

Other studies address the relative importance placed on the various types of measures (Kaplan and Norton 1996) in subjective weighting four aspects of organizations for measuring performance through Balanced Score Card (BSC). These studies fall into two research streams. The first stream focuses on economic models of incentive contracting. Economics-based agency models emphasize the role of performance measure choice in aligning agents' goals with those of the principal, and indicate that the choice of performance measures in incentive contracts should be a function of the incremental information content of each measure regarding the worker's action choices (e.g., Holmstrom 1979, Banker and Datar 1989, Feltham and Xie 1994, Hemmer 1996, Lambert 2001). But BSC has got its limitations for subjectivity in weighting which may have chance of favoritism in weighting (Christopher, David & Marshall 2003 ).

The second research stream adopts a psychological perspective. These studies examine how human information-processing capabilities and decision strategies influence the types of information individuals use when assessing performance. These behavioral experiments suggest that issues such as information overload and cognitive biases can play a significant role in the relative weights placed on different types of balanced scorecard measures (e.g., Lipe and Salterio 2000, 2002). In particular, this research finds that evaluators frequently place greater or exclusive emphasis on certain types of measures, even when other types of measures also provide relevant information on the subordinate's performance.

Though there are rare works done in the informal sector, especially for the microfinance sector, ACCION CAMEL uses subjective weight without mentioning the bases which made that effort less important.

Charles *et al* (2003) refers use of methodology to calculate the SCOR<sup>7</sup> weights takes

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<sup>7</sup> The FDIC's major off-site monitoring tool is the **Statistical CAMELS Off-site Rating (SCOR)** system. The system was designed to help the FDIC identify institutions that have experienced noticeable financial deterioration.

advantage of the linear portion of the logit model. Ignoring the intercept terms, the linear portion is a weighted sum of the bank's financial data, which can be denoted  $\beta x$  which equals  $\beta_1 x_1 + \beta_2 x_2 + \dots + \beta_{12} x_{12}$ . If the weights are computed for the composite CAMELS rating, this sum can be considered a measure of the bank's general financial strength. If the weights are computed for the capital rating,  $\beta x$  can be considered the measure of the bank's capital adequacy.

It might be noted that this method is closely related to a Taylor expansion of the logit model. The first derivative of the logistic function equals  $K \beta_i$  where  $K$  is a number that depends on the point at which the derivative is evaluated. However,  $K$  is the same for all variables. Thus, the first term in a Taylor expansion about the point  $x^B$  is  $K \beta_1 (x_1^A - x_1^B)$ , and the total is  $K \beta (x^A - x^B)$ . Of course, the intercept terms will not enter the Taylor expansion because they are constants. If the individual terms are expressed as percentages of the total, then  $K$  cancels from both numerator and denominator, and the result is identical to the formula above.

### 3.4 Literature Review of Financial Modeling

After the unique work of Altman in the 1960s regarding the prediction of bank failure, various off-site monitoring models have been developed by the regulatory agencies to complement the CAMEL<sup>8</sup> rating system. Most have relied on call report data. The success of these systems in identifying emerging problems obviously hinges on the degree to which the banks report their financial results truthfully and accurately during the periods between on-site exams.

Cole and Gunther (1998) develop a parsimonious econometric model of bank failure to serve as Early Warning Model. Reflecting the binary nature of our dependent variable, they use the probit model to estimate the relationship between a set of financial ratios of insured commercial banks and the likelihood of bank failure.

In the **Probit model**, they specify an unobservable index variable as a linear function of bank-specific characteristics and a disturbance term. Following standard practice, we assume positive values of the index variable are associated with failure, while non-

<sup>8</sup> In evaluating the financial performance and condition of banks, regulators use a combination of on-site examinations and off-site surveillance systems. During an on-site exam, regulators visit a bank's offices to evaluate its financial soundness and compliance with laws and regulatory policies, to assess the quality of its management team, and to evaluate its systems of internal control. Based on the findings of the exam, regulators assign the bank a composite rating, known by the acronym CAMEL, which refers to the five components of the regulatory rating system: capital adequacy, asset quality, management, earnings, and liquidity.



positive values are associated with survival. The resulting likelihood function is based on the standard normal cumulative distribution function. We maximize the likelihood function using the iteratively reweighted least squares algorithm.

They use seven financial variables, each measured as a percentage of gross assets (net assets plus reserves), to characterize the financial position of individual banks. Measures of capital adequacy, asset quality, earnings, and liquidity four of the five components of the CAMEL rating system are utilized.<sup>9</sup> These types of variables have been found significant in the previous studies of bank failure (see, Sinkey 1975, Bovenzi, Marino, and McFadden 1983, Korobow and David 1983, Gajewski 1989, Demirguc-Kunt 1989, Thomson 1992, Cole and Gunther 1998).

The expected effects on bank failure of capital adequacy, asset quality, and earnings are as follows. Total equity capital acts as a buffer protecting a bank's solvency against financial losses and is expected to reduce the probability of failure. Asset quality difficulties are measured by loans 90 days or more past due, nonaccrual loans, and other real estate owned, which consists primarily of foreclosed real estate assets. A positive relationship is expected between asset quality problems and the probability of failure. High net income generally reflects a lack of financial difficulties and so is expected to reduce the likelihood of failure.

**Probit and logistic regression methods** can give the probability of a firm being financially distressed based on the attributes or characteristics of the firm. These methods are mostly used as additional analysis in many of the business distress modeling to highlight the superiority of their new methods. An extension to the use of simple logit model is the use of mixed logit model in Jones and Hensher (2004).

In a simple probit model, the explanatory variables or the attributes of the firm  $X_1, X_2, \dots, X_p$  and the dependent variable  $W$  (taking values of 0 or 1 representing healthy and distressed firm) can be written into a linear model:  $W = \beta_0 + \beta_1 X_1 + \dots + \beta_p X_p + \epsilon$ .

Probit regressions are less frequently used than the logit model perhaps owing to the greater availability of logit model in computer packages. The logit model was used as a

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<sup>9</sup> It was not difficult to envision numerous additional variables as potential candidates for inclusion in their bank failure model. However, authors feel that the relatively parsimonious model they employ is well suited for that study. To the extent that the inclusion of additional variables could improve the model's accuracy, authors comparison of on- and off-site monitoring systems understates the value of early warning models.

viable business distress modeling method in Tirapat and Nittayagasetwat (1999) and they investigated the business distress classification accuracy under various logit probability cut off points for both the training sample and hold out samples. They also included macroeconomic variables in addition to the financial attributes of the firm.

It is well known that logit models are sensitive to multicollinearity<sup>10</sup> and this is particularly serious in financial distress modeling since the independent variables are often financial ratios that share the same denominator or numerator. This problem is prevalent in many of the works on business failure modeling and is likely lead to poor model performances in light of the new data.

A recent development in logit model is mixed logit models (McFadden and Train 2000) originated from the hedonic models developed in Cardell and Dunbar (1980) and Boyd and Melman (1980). The basic idea of the mixed logit model is that the business distress alternatives or categories such as distressed and insolvent may be correlated and heteroscedastic.<sup>11</sup> Another strategy was adopted in Jones and Hensher (2004) in their application of mixed logit model in financial distress modeling. While Jones and Hensher (2004) showed the performance of this model is better than the traditional multinomial logit model, the interpretation of the coefficients in these models is more complex and requires careful interpretation of the random components than the traditional linear models.

**Principal component analysis** is not a classification technique but an exploratory technique which can be used to identify characteristics of the financially distressed and healthy firms. The foundation of principal component analysis is originated from Pearson (1901) and Hotelling (1933). This technique aims to take a set of  $p$  variables  $X_1, X_2, \dots, X_p$  such as firm's financial and nonfinancial characteristics and find a linear combination of these to produce uncorrelated indices  $Z_1, Z_2, \dots, Z_p$ . The main use of the principal component analysis is to reduce the dimensionality of the data to a few of the  $Z_i$ , so that the multivariate data set is adequately described by these indices.

The principal components  $Z_i$  can be plotted against each other to gauge if there are

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<sup>10</sup> Other assumptions include equal variance of residuals, non correlated errors. Sometimes it is necessary to transform the data using logarithm or otherwise to achieve these.

<sup>11</sup> In statistics, the variance of the error term, given the explanatory variables, is not constant.

discerning patterns between distressed and healthy firms in relation to their principal component  $Z_i$  scores. A combination of  $Z_i$  can then be chosen to classify firms into their financial status. This technique was used in Takahashi and Kurokawa (1948) and more recently in Ganesalingam and Kumar (2001). The principal component scores  $Z_i$  can also be used as variables in other statistical analysis such as logistic regression to enhance the classification performance of other statistical models.

Perhaps the most popular technique in business distress modeling is the two group **Discriminant Analysis**. Due to its availability on standard computing packages, almost every literature on business failure covered this technique. Among the most cited work in this area are those by Altman and Altman *et al.* (1968, 1984, 2000, 2002, Altman, Haldeman and Narayana 1977, Altman, Marco and Varetto 1994). Despite the violations of the statistical assumptions of discriminant analysis in business distress modeling,<sup>12</sup> discriminant analysis is still a widely used method as it can usually provide a fairly good classification. The statistical significance of the results, however, would need to be revised in the light of these violations.

The simplest discriminant analysis is perhaps the linear discriminant analysis devised by R.A. Fisher (1936) as a way of distinguishing between groups. This device examines the financial as well as nonfinancial aspects using the financial ratio and individual responses to calculate a cut off score for each area on the basis of minimizing misclassification errors. This analysis seeks to find a function of linear combination of  $X_i$  variables (e.g.  $i$ -th financial attributes of the firm with  $p$  attributes in total) that can separate healthy and distressed firms. The output of Fisher's discriminant analysis is a set of linear function as shown in  $Z = a_1X_1 + a_2X_2 + \dots + a_pX_p$ . In this equation, the  $a_1, a_2, \dots, a_p$  are chosen to maximize the  $F$  ratio (Fisher 1936), which is the between groups variation  $M_b$  divided by within group variation  $M_w$ . In this manner the discriminant function is the one that maximizes the variance between the groups and minimizes the variance within each group. Under this method, when group sizes are equal, the cut off value to classify the firms is the mean of the two centroids (for two-group discriminant analysis). If the groups are unequal, the

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<sup>12</sup> For example: non multivariate normal variables, lack of independence between different attributes of the same firm and unequal within group variable variances between failed and healthy firms. If the within group variable variances are not the same between failed and healthy firms, then it is necessary to use quadratic discriminant analysis.

cut off is the weighted mean.

The discrimination functions described above are highly sensitive to outliers and can fail in case of heavy tailed distributions. There have since been some new developments which nonparametric methods (Epanechnikov 1969, Ghosh and Chaudhuri 2005) try to surpass the normality assumption imposed by the above analysis and their applicability to financial distress modeling is yet to be seen.

Molinero and Ezzamel (1991) and Molinero and Serrano (1996) have proposed a system based on Multidimensional Scaling (MDS) for the prediction of bankruptcy, one which is more intuitive and less restrictive with respect to the starting assumptions. MDS visually classifies bankrupt and solvent firms, so that the decision making process is enriched and more intuitive. With the same aim, Molinero and Serrano (1996) have proposed applying another neural model, namely self-organizing feature maps (SOFM). This neural model tries to project a multidimensional input space into an output space in such a way that the companies whose ratios present similar values appear close to one another on the map which is created.

Multidimensional scaling (Torgerson 1952, Kruskal 1964) constructs a map to show the relationship between objects, using a table of distances. In the case of financial distress modeling (Molinero and Ezzamel 1991, Neophytou & Molinero 2004), the idea is to calculate the distances between financial attributes of pair-wise firms and then project them on to a "map" to examine whether there is a pattern between failed and successful firms.

The outcome of this analysis is a set of co-ordinates for  $p$  firms in  $t$  dimensions. These can be used to map out how failed and healthy firms are related. It is often desirable to keep the number of dimensions  $t$  to 2 or 3, so the results can be displayed graphically. It is not always possible to do this and in the case of Neophytou and Molinero (2004), six dimensions were chosen. These dimensions are then examined on a pair wise basis on two dimensional plots.

**Time Series Analysis** is a particularly attractive tool in business distress modeling as it can incorporate multi period information and account for serial correlation across firms' attributes over time. Theodossiou (1993) describes the time series behavior of the healthy and failed firms through  $k$ -th order vector autoregressive (VAR) model.

Theodossiou (1993) developed a time series cumulative sum model (CUSUM). This model is designed to provide a signal of firm's deteriorating condition.

One of the earliest works in using **Linear Programming Methods** for classification came from Freed and Glover (1981), which was also used by Mahmood and Lawrence (1987) and Gutpa, Rao and Bagchi (1990) in classifying financial health of a firm. There are many different ways in which the linear programming can be set up to achieve this purpose. The objective function may, for example, be based on: maximizing minimum distances of misclassification (Freed and Glover 1981), optimize the sum of distances (Bajgier and Hill 1982), minimize the sum of interior<sup>13</sup> distances (Freed and Glover 1986), minimize the sum of deviations (Freed and Glover 1986) or even a "hybrid" of minimize the difference between exterior<sup>14</sup> and interior distances (Glover, Keene and Duea 1988, Glover 1990). Other variations based on minimizing the number of classifications using mixed integer programming have also been proposed in Banks and Financial institution, Prakash (1991) and Koehler and Erenguc (1990).

These early research can be problematic. As demonstrates in Xiao (1993), the maximizing minimum distances (MMD) and minimizing sum of deviations (MSD) models do not work in every case in the sense it is possible to get multiple optimal solutions from the linear programming models which suggest different classifications. This occurs even when the two groups are well separated. This is not desirable since it is important to be able to make clear decision of the financial status of the firm. Xiao (1993) then went on to demonstrate the conditions when these methods would fail and generally recommend MSD over MMD models. Theoretical results aside, the MSD models also appear to classify better in simulation studies than MMD models (Bajgier and Hill 1982, Freed and Glover 1986, Joachimsthaler and Stam 1988).

The most recent development in the use of linear programming to solve classification problems arises from the works of Lam, Choo and Moy (1996) and Lam and Moy (2003). The authors in these works provide a simple linear programming technique which can classify better than MSD models or Fisher's linear discriminant function in a number of simulations where there is overlap between groups.

Lam and Moy (2003) claimed that their model is not unlike the philosophy of Fisher's

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<sup>13</sup> Interior distances refer to distances within groups.

<sup>14</sup> Exterior distances refer to distances between groups.

discriminant analysis in maximizing a ratio of the between group deviations to the within group deviations.

Lam and Moy (2003) extend LP1 into piecewise linear programming model with a set of weights putting greater emphasis on observations that can be clearly distinguished by various different discriminant methods and demonstrated that this technique can give quite good classification results over existing methods such as MSD and Fisher's discriminant analysis. The practical differences in results, however, are quite small, differing from 1 to 2% in most cases.

**Survival Analysis**, using the Cox proportional hazard model, appeared in Luoma and Laitinen (1991) and Lane, Looney and Wansley (1986). While it has not been extensively used in the business distress modeling literature, it is nevertheless a viable statistical technique.

To classify the firm into financial healthy and distressed categories, Lane, Looney and Wansley (1986) based the probability cut offs on the proportion of non-failed banks in much same way as was done in the case of logistic regression in Martin (1977).

The **Multi-Criteria Decision Aid (MCDA) Methods** are designed for these types of problems and they are well suited to financial distress modeling. An important contribution of the MCDA is that they can incorporate both quantitative and qualitative information, thereby allowing their models to achieve as much as possible with all the available information. Financial distress classification is characterized by multiple criteria (usually financial ratios) which may give conflicting results. Very often, in practice, there is a complex evaluation process which is subjective and requires the expertise of the decision maker.

**Utility-based Approaches** require, in a nutshell, the decision maker's preference to be modelled into a utility function with the optimal decision taken at the maximum of the utility function. Multi-attribute Utility Theory (MAUT) is an extension of the traditional utility theory in the multivariate case.

The determination of the additive utility function requires cooperation between the decision analyst and the decision maker to decide the form of the utility function and the criteria tradeoffs using interactive techniques such as the midpoint value (Keeney and Raiffa 1993).

Finally, a second linear programming is solved to maximize the clarity of the classification obtained from the solutions of linear programming approach (LP1) and mixed integer problem (MIP). A detailed description of this method can be found in Doumpos and Zopounidis (1999) and Zopounidis and Doumpos (2000).

The **Rough Set Theory** is another useful tool in classification problem. This theory was introduced by Pawlak (1982) and since then there has been application of this method in business distress modeling (Slowinski and Zopounidis 1995, Dimitras, Slowinski, Susmaga and Zopounidis 1999). In predicting a new firm into business distress categories, the rough set theory could either successfully give a classification or the following situations may occur: (a) The new firm matches an approximate rule or several rules indicating different business distress classes; (b) The new firm did not match any of the existing rules.

In the first situation, the decision maker is informed of the strength of classification rules (measured by number of firms satisfying the condition attributes and belonging to the suggested business distress class). In the second case, the valued closeness relation (VCR) by Slowinski (1993) can be used. This involves applying indifference, strict difference and veto thresholds on particular attributes used in concordance and discordant tests. Firstly, the concordance procedure would find a set of attributes affirming firm  $z$  is close to different rules and assess their relative importance. Secondly, a discordance procedure finds attributes of the firm  $z$  not in agreement with the first procedure to calculate the possible reduction of the level of concordance.

The **Outranking Relations Approach** started from the development of ELECTRE (Elimination Et Choix Traduisant la REalité) by Bernard Roy. An outranking relation is a binary relation where the decision maker assesses the outranking strength between firm's  $a_i$  and  $a_f$ . The assessment of the strength is based on whether there are sufficient evidence through the coalition of criteria to determine that  $a_i$  is at least as good as  $a_f$ , with no other evidence to refute this statement. There are usually two stages in outranking relations approach: the first step is to rank the firms while the second step may involve further analysis on the outranking relations to obtain the best alternatives, or to sort them into categories, or to rank them from the most preferred to least preferred scale.

The ELECTRE TRI is probably the most frequently used method in this category for

business distress modeling and a brief outline of the method is described here. ELECTRE TRI aims to sort a given set of firms  $A=\{a_1, a_2, a_3, \dots, a_k\}$  into ordered categories (from worst to best)  $c_1, c_2, \dots, c_q$ . The application of ELECTRE III method can be found in the works of Dimitras, Zopounidis and Hurson (1995).

**Expert systems** are “computer programs that use specialised symbolic reasoning to solve difficult problems”(Luconi, Malone and Morton 1986). Symbolic reasoning is a set of rules resulting from logic and learning to produce a reasonable answer to a particular problem. Expert systems may be user defined (built by human expert themselves) or data driven (built by a computer learning algorithm such as inductive learning with some human expert interventions).

The **User Driven Expert** systems are almost entirely developed by experts based on their prior experience and knowledge (Duchessi and Belardo 1987, Elmer and Borowski 1988). The success of these expert systems depends heavily on the ability of the expert to correctly identify financially distressed firms through a list of criteria. For example, if the earning trend is positive and the current ratio trend is up, then there will be no loan default.

The User Driven Expert System will then search for instances of mismatches and matches in the database and the rules can be accepted, rejected or modified based on the outcome. While some works developed the expert systems entirely through their experts, others like Srinivasan and Ruparel (1990) have combined other mathematical techniques such as Analytical Hierarchical Process (AHP) (Saaty 1980, 1982, Saaty and Alexander 1989) to resolve conflicting conclusions that could be reached by the experts in assessing business failures.

The preference matrix at each criterion is usually based on some characteristics of the firm developed by the human expert, so the classification of the firm is on a case by case basis. The AHP can be used as a standalone technique in Srinivasan and Kim (1987) or embedded as part of the expert system in Srinivasan and Ruparel (1990).

While the use of AHP in financial distress expert systems can resolve conflicting criteria in determining the financial status of the firm and has been successfully implemented in some expert systems, it does require substantial negotiation between the expert and the computer analysts to build a workable system. In particular, changing economic



conditions do require changing the expert systems and it can be an expensive exercise. Sometimes the experts also cannot see what could happen under different scenarios as they may not have prior experience in those areas; this would limit the applicability of expert system. Also, the very subjective nature of these expert systems can make them unattractive to some organizations, as too much reliance is placed on the ability of the experts rather than from the evidence of the data. For these reasons, recent expert systems in financial distress modeling have moved towards a data driven approach.

**Classification Trees or Recursive Partitioning Algorithm (RPA)** is very much like an expert system without human interventions. It involves building many different nodes, with each node representing a rule until a classification decision is made. RPA usually has binary splits in the financial distress modeling literature (Frydman, Altman and Kao 1985). This measure is used rather than the usual entropy or gini index (Breiman, Friedman, Olshen and Stone 1984) since in financial distress modeling, the training data set often over present rare, failed cases rather than being proportional to the population. This is quite a natural restriction since in most cases, there are usually more financially sound firms than distressed ones. While this is perhaps most frequently used pruning method in business failure modeling (Frydman, Altman and Kao 1985, Srinivasan & Kim 1987), there are also other ways of pruning such as shrinking (Gelfand, Ravishankar and Delp 1991) which can also be used.

The **Data Driven Expert** system uses machine learning rules such as inductive learning (Messier and Hansen 1988, Shaw and Gentry 1988) and genetic programming (Salcedo-Sanz, Fernández-Villacañas, Segovia-Vargas and Bousoño-Calzón 2005). This technique was used by Messier and Hansen (1988) in which they produced some successful decision trees in classifying the financial status of the hold out firms.

**Genetic Programming** creates a computer program by breeding a population of computer programs to solve problems. This type of programming is inspired by the biological genetic operations and Darwin's "Survival of the fittest" concept. A general description of the Genetic programming can be found at [www.genetic-programming.com](http://www.genetic-programming.com) or [www.genetic.programming.org](http://www.genetic.programming.org).

In the context of a business failure prediction problem, Salcedo-Sanz, Fernández-Villacañas, Segovia-Vargas and Bousoño-Calzón (2005) develop a decision tree to distinguish between financially healthy and distressed firms using financial ratios

(terminals of the problem).

As in conformity with biostatistics terms, a false positive (FP) is a firm classified as being positive from the tree but, in fact, has failed. The concepts of false positives (FP), false negatives (FN), correct negatives (CN), and correct positives (CP) are then used to generate the fitness function. Two fitness functions in particular have been examined in Salcedo-Sanz, Fernández-Villacañas, Segovia-Vargas and Bousoño-Calzón (2005). The paper also compared the classification error of genetic programming with SVM<sup>15</sup> (support vector machine) (Borges 1998, Scholkopf and Smola 2002) and found genetic programming has a superior performance.

**Neural Network** attempts to find patterns of business failures by emulating the biological functions of the human brain. It requires a set of training data to train the computer to identify patterns before developing a stable model that can be used to classify firms into different financial distress categories.

The inputs are usually financial ratios that are fed into the neurons, which react and process the information to produce the output, classifying firms into financially distressed and non-financially distressed categories. In a typical process there will only be a single winning neuron which will be activated to produce the output.

The typical training process of neural network usually preset criteria to judge the model performance is set and the input weights assigned to each of the neuron are altered until the errors fall within a reasonable limit. Many variations of different learning rules and model performance criteria.

The process is a very commonly used neural network model in financial distress modeling (Shah and Murtaza 2000, Charitou, Neophytou and Charalambous 2004). The inputs, usually financial ratios, get feed into the model with different weights and in turn stimulate different neurons. The winning neuron is usually the one that matches closest to the profile of the input variables, so that the most plausible neuron can be activated to give the output.

Financial distress models using neural networks are fairly popular, and they do appear to give convincing performance. Altman, Marco and Varetto (1994) show that the accuracy

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<sup>15</sup> SVM separate data using kernel functions to separate m dimensional data so the classification boundary between different groups are maximized.

of neural networks is comparable to discriminant analysis models. The acceptance of neural network in the statistics community, however, is relatively slow. Due to this reason it is difficult to see exactly the set of rules that the computer used to make the decision and this method requires more computational effort than most of the traditional statistical methods.

**The Jack-knife Technique**<sup>16</sup> is carried out by dividing the sample equally into two groups. The first of these is used to extract the discriminant function or to train the neural network, whilst the second serves as the test. However, the use of this method has several inconveniences, given that we take advantage of only half of the information. Cross validation can be applied in order to obtain a more reliable estimation, that is to say, the repetition of the experiment several hundred times with different sample-test pairs.

Although bootstrap and cross validation tend to offer slightly better results, the jack-knife technique has been frequently applied in empirical financial research, including research into the prediction of company failure, such as that carried out by Tam and Kiang (1992). Whilst LDA or logistic regression poses the problem of appropriate model selection, the transformation of the input variables, etc., MLP is not itself free of problems: specifying the transfer functions, the number of neurons, the number of layers, when to stop the learning, etc. These are problems which theoretical studies on neural networks have yet to solve.

The Jack-knife technique was applied to both LDA and MLP. LDA produced nine misclassifications. The presence of outliers, non-normality of ratios and nonlinear relations is responsible for the largest number of errors obtained by LDA. Eliminating the outliers, or incorporating nonlinear relations, as in Molinero, C., M., & Serrano (1993), will lead to an improvement of the results from LDA or logistic regression.<sup>17</sup>

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<sup>16</sup> One of the central goals of data analysis is estimate of the uncertainties in fit parameters. Sometimes standard methods for getting these errors are unavailable or inconvenient. In that case, we may resort to a couple of useful statistical tools that have become popular since the advent of fast computers. One is called the "jackknife" (because one should always have this tool handy) and the other the "bootstrap". Here we describe the jackknife method, which was invented in 1956 by Quenouille and developed further by Tukey in 1957. (See M. C. K. Yang and David H. Robinson, *Understanding and Learning Statistics by Computer*, World Scientific, Singapore, 1986).

<sup>17</sup> For example, by including the product of various financial ratios as an input, we have been able to reduce the number of misclassifications in the logistic regression estimated in section III.2 from four to two (test not reported in Appendix B; firms 29 and 54 were misclassified). The use of more complex statistical models, such as projection pursuit regression, would probably have also achieved the adjustment of the function to the maximum, even without these two errors.

The **Balanced Scorecard** is a strategic planning and management system that is used extensively in business and industry, government, and nonprofit organizations worldwide to align business activities to the vision and strategy of the organization, improve internal and external communications, and monitor organization performance against strategic goals. It was originated by Robert Kaplan (Harvard Business School) and David Norton as a performance measurement framework that added strategic nonfinancial performance measures to traditional financial metrics to give managers and executives a more “balanced” view of organizational performance. While the phrase balanced scorecard was coined in the early 1990s, the roots of the this type of approach are deep, and include the pioneering work of General Electric on performance measurement reporting in the 1950s and the work of French process engineers (who created the *Tableau de Bord* – literally, a “dashboard” of performance measures) in the early part of the 20th century. Kaplan and Norton describe the innovation of the balanced scorecard as follows: “The balanced scorecard retains traditional financial measures. But financial measures tell the story of past events, an adequate story for industrial age companies for which investments in long-term capabilities and customer relationships were not critical for success. These financial measures are inadequate, however, for guiding and evaluating the journey that information age companies must make to create future value through investment in customers, suppliers, employees, processes, technology, and innovation.”

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**Data Envelopment Analysis (DEA)** approach to efficiency to show that ratio analysis does not capture DEA efficiency (Thanassoulis 2001) and mentioned earlier. There are two main approaches to efficiency assessment: parametric frontiers and Data Envelopment Analysis (DEA). Berger and Humphrey (1997) provide a comprehensive review of methods and models up to 1997. This subject has continued to interest researchers up to the present date; some recent papers on efficiency and financial institutions are Athanassopoulos (1997), Bala and Cook (2003), Brockett *et al.* (2004), Dekker and Post (2001), Hartman *et al.* (2001), Kuosmanen and Post (2001), Luo (2003), Pille and Paradi (2002), Paradi and Schaffnit (2003), Pastor *et al.* (1997), Saha and Ravisankar (2000), Seiford and Zhu (1999), and Worthington (2004).

One advantage of DEA (nonparametric) over parametric approaches to measure efficiency is that this technique can be used when the conventional cost and profit functions cannot be justified (Berger and Humphrey 1997). DEA performs multiple

comparisons between a set of homogeneous units. For an introduction to the theory of DEA, one may see Thanassoulis (2001), Charnes *et al.* (1994), or Cooper *et al.* (2000).

A major problem with the selection of inputs and outputs in a DEA model is that there is no statistical framework on which significance tests can be based. The neat approach of variable selection that is used in regression, based on t statistic values, has no parallel in DEA. One may be tempted to use as many inputs and outputs as one may think to be relevant, but some of them will be correlated, perhaps highly so. Parkin and Hollingsworth (1997) review the problems that variable selection creates in DEA. Jenkins and Anderson (2003) warn against the use of correlated inputs and outputs in a DEA model. An important issue is that the number of 100% efficient units increases with the number of inputs and outputs in the model, and adding irrelevant variables may change the results obtained (Dyson *et al.* 2001, Pedraja Chaparro *et al.* 1999). Specification search methods in DEA have been proposed by Norman and Stocker (1991), Pastor *et al.* (2002), and Serrano Cinca and Mar Molinero (2004).

**Statistical CAMELS Off-site Rating (SCOR)**<sup>18</sup> system was developed in the late 1990s to detect banks whose financial condition had substantially deteriorated since their last on-site examination. As its name indicates, the model is an off-site system that is meant to supplement the current system of on-site examinations (Cole, Cornyn and Gunther 1995). It compares examination ratings with the financial ratios of a year earlier. SCOR identifies which financial ratios were most closely related to examination ratings and uses that relationship to forecast future ratings.

If the relationship between examination ratings and financial ratios changes, this change will be reflected in the model, generally through a change in coefficients, but only after a delay. However, as the model is estimated with examination ratings from the past year, the changes in the relationship between ratings and ratios will not be incorporated into the model until the next year. SCOR uses only two peer groups: banks and thrifts. Experimentation has indicated that additional peer groups do not improve the model's

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<sup>18</sup> Charles Collier, Sean Forbush, Daniel A. Nuxoll, and John O'Keefe (2003): The SCOR System of Off-Site Monitoring: Its Objectives, Functioning, and Performance. The SCOR model is very similar to the SEER rating model, originally called FIMS, developed by the Federal Reserve System. Both SEER and SCOR draw on a long history of models of bank failure and distress. Demirgüç-Kunt (1989) reviews pre-FIMS developments, and Gilbert, Andrew, and Vaughan (1999) explain the rationale behind such models.

forecasting power.<sup>19</sup>

The model was developed with a somewhat conservative bias to avoid the problem of excessive data mining. This problem occurs because one can always find a complete coincidence that is statistically significant if one looks at enough data. One can avoid this pitfall by choosing variables that actually do cause problems in banks. Choosing such variables necessarily involves using informed judgment. The original specification for SCOR was chosen after both a review of the literature on bank failures and discussions with bank (Cole, Cornyn and Gunther 1995, Hooks 1995 and Demirguc-Kunt 1989).

### 3.5 Literature Review in MFIs Modeling

Microcredit emerges as a new approach to fight poverty. But, is the money lent by MFIs efficiently managed? There is a large body of literature on bank efficiency, but very little on microfinance efficiency as mentioned earlier.

A common understanding on the reporting, measurement, and evaluation of MFI performance has not been reached no surprise given the diversity of the providers. Efforts in place to develop rating and certification systems include:

- a. In response to the need for globally accepted and standardized analytical tools, Standard & Poor's Ratings Services is taking steps to develop ratings criteria for MFIs. A comprehensive MFI ratings methodology addressing the analytical needs of investors was published by Standard & Poor's.
- b. PEARLS rating system. This is a rating system developed for credit unions by the World Council of Credit Unions (WOCCU). The rating system includes a certification process called Finance Organization Achieving Certified Credit Union Standards (FOCCUS).
- c. ACCION Camel. The evaluation guideline for MFIs developed by ACCION International.
- d. Girafe rating system. Developed by PlaNetFinance.
- e. MicroRate. Developed by Damian von Stauffenberg of MicroRate.
- f. MicroBanking Bulletin/MicroBanking Standards Project. Funded by the Consultative Group to Assist the Poorest (CGAP).
- g. The Philippine Coalition for Microfinance Standards. It developed a set of performance standards to serve as guidelines or benchmarks to assess the operations of Philippine NGOs involved in micro-finance.
- h. CGAP Microfinance Rating and Assessment Fund.
- i. Institutional Performance Standards and Plans Developed by the Committee of

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<sup>19</sup> In two different experiments, credit card banks and large banks were eliminated from the model. In both cases, the model's forecasting power was worse. Homogeneity is the enemy of statistical models.

Donor Agencies for Small Enterprise Development and Donor's Working Group on Financial Sector Development, United Nations Capital Development Fund.

**Microfinanza Rating** is a division of Microfinanza SRL and it is the most active microfinance rating agency. It has active clients in many countries of Eastern Europe and the Balkans, Central Asia and Caucasus, Africa, Latin America and the Caribbean.

Microfinanza rating methodology is the result of quantitative and qualitative assessment factors. The quantitative analysis is always integrated by the description and put in the context of the used indicators. Starting from the reclassification of the financial statements and of the portfolio data of the last three business years, a thorough evaluation of financial and operational performances is realized, according to the commonly accepted international standards for microfinance. Financial adjustments for subsidies, inflation, loan loss provisions and accrued interests are considered. The results in terms of indicators are analyzed in the context of local, regional or international benchmarks referred to MFIs with similar features (peer groups).

The qualitative analysis includes a careful evaluation of the institutional ownership and governance of the market positioning and a complete assessment of the different organizational, operational and management aspects.

In response to the need for globally accepted and standardized analytical tools, **Standard & Poor's Ratings Services** is taking steps to develop ratings criteria for MFIs. As S & P incorporated unique features of the MFI model into the evaluation process, the draft criteria include economic and industry risk; market position and diversification; management and strategy; ownership and governance; financial reporting; operational, enterprise, credit, and market risk management; earnings and profitability; funding/liquidity; and Capitalization. But still they are validating the robustness of these criteria through a pilot program. Moreover, the social aspect of the mission of the MFIs is missing as set the criteria.

In absence of Microfinance Industry standards, PKSF has introduced 14 guidelines which will create an enabling environment that would facilitate MFI-NGO governance in a transparent and accountable manner and a spontaneous growth of the microfinance sector. Guideline for Performance Standards through categorization of POs is one of them. PKSF considers viability of microcredit borrowers, program placement, group management, loan disbursement and recovery system level of skills of field workers, efficiency of

accountant, quality of chief executive, skill of mid and top level managers, sound governance, incentive base for management staff and employees, MIS, Accounting Information System, regular internal supervision, status of physical assets financial sustainability, quality of portfolio; productivity ratios, status of microcredit fund of the PO and financial ratio analysis.

ACCION<sup>20</sup> referred under CAMEL methodology five areas of financial and managerial performance including Capital Adequacy, Asset Quality, Management, Earnings, and Liquidity Management are taken into account to review and rank the lending institutions in accordance with their performance.

The ACCION CAMEL analyzes and rates 21 key indicators, with each indicator given an individual weighting. Components of each area and the criteria ranges for determining each rating are as follows: capital adequacy includes leverage, ability to raise equity and adequacy of reserves; asset quality includes portfolio quality (portfolio at risk, Write-offs/write off policy), Portfolio classification system, and Fixed assets (Productivity of long-term assets, infrastructure) Management includes Governance, Human Resources, Processes, controls and audit, Information Technology System, strategic planning and budgeting; earnings includes adjusted return on equity Operational Efficiency, Adjusted Return on Assets and Interest rate policy; Liquidity management includes Liability structure, Availability of funds to meet credit demands, Cash flow projections and Productivity of other current assets.

**GIRAFE** Methodology constitutes an acronym for the various analytical categories of assessment: Governance, Information and systems, Risk management, Activities, Funding and liquidity, Efficiency and profitability. Governance includes decision making planning, management team and HR management; Information includes information system design and data quality; Risk management includes procedures and internal controls and internal audit; Activities includes financial services management, Credit risk and credit risk coverage; Funding and Liquidity; Efficiency and Profitability includes return on asset, revenue quality, operational efficiency and asset optimization.

**Institutional Performance Standards and Plans** are intended for use by project officers

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<sup>20</sup> The ACCION CAMEL Technical Note by Sonia B. Saltzman and Darcy Salinger, ACCION International September 1998



in donor and implementing organizations, managers, and policy makers. The purpose of these principles is to establish common standards for donor agencies to apply in supporting broader access to financial services for micro and small enterprises. They identify the characteristics such as: (a) Institutional Strengths: it includes institutional culture, structures, capacities, and operating systems, accurate management information systems, Operations and meaningful reporting standards (b) Quality of Services and Outreach: it includes focus on the poor, client-appropriate lending, savings services and growth of outreach. (c) Financial Performance: it includes appropriate pricing policies, portfolio quality, self-sufficiency and movement toward financial independence.

**Micro Banking Standards Project** was founded in 1997 to help MFIs to understand their performance in comparison with their peers, to establish industry benchmarks/performance standards, to enhance the transparency of financial reporting, and to improve the performance of MFIs. MFIs participate in the Project on a quid pro quo basis.

The Project forms peer groups based on three main indicators: Outreach and institutional indicators: age of institution, number of offices, number of staff, active borrowers, and percent of women borrowers; Macroeconomic indicators: GNP per capita (current prices), GDP growth rate, inflation rate, deposit rate; and financial deepening and Profitability: adjusted return on assets, adjusted return on equity, operational self-sufficiency, financial self-sufficiency, and profit margin.

**MicroRate** is a private company dedicated to the evaluation of microfinance institutions. Its objectives are: to quantify fiduciary and credit risk to potential investors or creditors; to create a mechanism to link microfinance institutions with domestic and international capital markets, and to stimulate financial deepening in emerging markets. Among the various services MicroRate performs, it undertakes three types of evaluations for MFIs: Full Initial Evaluation: it results in the delivery of a concise report detailing the credit worthiness and financial health of an MFI and a management letter detailing the strengths and weakness of financial and operational performance; Annual Analysis: annual updates are identical to full evaluations, but they can be performed at lower cost and Preliminary Credit Assessment: which it looks at similar areas of risk to the viability of the company, but less in-depth.

**PEARLS rating system** uses a set of financial ratios to monitor the financial stability of

the credit unions within WOCCU's developing movement projects. Each letter in the word PEARLS measures the key areas of credit union operations: Protection, Effective financial structure, Asset quality, Rates of return and costs, and Liquidity and Signs of growth. Protection is measured by comparing the adequacy of the provisions for loan losses against the amount of delinquent loans. Effective financial structure measures credit union assets, liabilities and capital, then recommends the "ideal" structure. Credit unions are encouraged to maximize earning assets as the means to achieve sufficient earnings. Asset quality is used to identify the impact of non-earning assets by analyzing delinquency ratios, percentages of non-earning assets and the financing of non-earning assets. Rates of return and costs calculate yields on the basis of average outstanding investments, unlike other systems that calculate yields on the basis of average assets. Liquidity is traditionally viewed in terms of cash available to lend - a variable exclusively controlled by the credit union. Signs of growth links growth to profitability, as well as to other key areas by evaluating the strength of the system as a whole.

**The Philippine Coalition for Micro-Finance Standards** outlined the following critical performance indicators in setting the performance standards for microfinance NGOs: Outreach is measured by number of active clients. Collection efficiency and portfolio quality is measured by repayment rate and portfolio at risk. Sustainability is measured by operating cost ratio, operational self-sufficiency and financial self-sufficiency. Capital adequacy /Leverage are measured by equity to Asset Ratio and Liquidity is measured by current ratio.

**CRISIL's** rating criteria for the financial sector entities is done through a qualitative cum quantitative approach by following a structured methodology called as CRAMEL. The relative strengths and weakness of each entity as compared to its peer group are evaluated based on the rating criteria. The revised appraisal format, termed as MICROS, is structured along the following lines: management, institutional arrangement, capital adequacy and asset quality, resources, operational effectiveness, scalability and sustainability.

Since CRISIL is likely to rate MFIs/NGOs internationally, it would be pertinent to factor the country risk in which the MFI is situated.

**Double Bottom Line (DBL)** includes the financial bottom line and a second bottom line providing net results of an endeavor's social elements. This implies social activities can

be evaluated to the same degree as financial performance. Current tools for expressing the second bottom line include qualitative reporting on performance, management devices, quantified statistics, monetized results, and indices. No universal standard yet exists.

**Socially Responsible Investment (SRI)** is a subset of social investing that denotes value-driven investment choices. The term includes social screening of general investments, community investing, and shareholder activism within corporations.

**The SPI-CERISE Approach** is aimed at defining, along with the assessment of financial performances, a tool for assessing social performance in the field of microfinance (Doligez & Lapenu, 2006) as well as promoting and strengthening social performance in the microfinance sector. The analysis is based on a questionnaire mobilizing information from within the MFI (founding principles, business plan, activity reports, management statement, information from the MIS or Management Information System, etc.). Measuring social performance using the SPI-CERISE tool is thus complementary to impact assessment. The SPI-CERISE tool is founded upon four major dimensions of social performance:

Dimension 1: orientation towards poor or marginalized clientele not having access to the banking sector. Targeting and outreach (D1) refer to the MFI's strategies to reach the poor and excluded. Targeting can be geographic, such as when an institution decides to operate in an area where no other financial services are available. It can be individual, when it purposely selects clients based on poverty levels or exclusion. It can be methodological, when services are designed specifically to reach the poor or excluded.

Dimension 2: diversification of services so as to adapt them to the needs of this specific public. Appropriate services (D2) assess an institution's ability to provide products tailored to clients' needs. This entails offering a range of financial services of high quality as well as innovative and nonfinancial services.

Dimension 3: establishing relationships of trust with its clients and strengthening their political and social capital. Some MFIs strive to build social capital (D3), by fostering trust and transparency, encouraging participation and developing activities that promote empowerment.

Dimension 4: the institution's social responsibilities with respect to its salaried employees, its clients and its communities. Social responsibility (D4) extends to

employees through appropriate human resource policies, to clients by guaranteeing respect of consumer protection principles, and to the community and the environment by respecting the context where the MFI operates.

**The Social Performance Task Force**<sup>21</sup> defines social performance as “the effective implementation of an institution’s social mission into practice. This mission may include serving larger numbers of poor and excluded people; delivering high-quality and appropriate financial services; creating benefits for clients; and improving the social responsibility of an MFI” (Hashemi 2007). Social responsibility applies to all economic sectors and refers to an organization’s responsibility for the impact of its decisions and activities on society and the environment through transparent and ethical behavior (Gendron 2009).

There are contradicting viewpoints regarding the pairing of financial sustainability and social objectives. Some observers suggest an incompatibility, pointing to problems of mission drift experienced by MFIs that pursue profitability by insisting on physical guarantees, increasing loan amounts and targeting the better-off (Christen 2001). Others emphasize synergy, arguing that social performance improves mutual trust, client participation and satisfaction, which translates into higher repayment rates and lower transaction costs (Lapenu 2007). While these assertions draw on case studies, the research has not been extensive enough to draw sector-wide conclusions.

The **Triple Bottom Line** captures an expanded spectrum of values and criteria for measuring organizational (and societal) success: economic, ecological and social. With the ratification of the United Nations and ICLEI TBL standard for urban and community accounting in early 2007, this became the dominant approach to public sector full cost accounting. Similar UN standards apply to natural capital and human capital measurement to assist in measurements required by TBL, e.g. the eco Budget standard for reporting ecological footprint.

In the private sector, a commitment to corporate social responsibility implies a

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<sup>21</sup> The Social Performance Task Force (SPTF) was formed in March 2005 by CGAP, the Argidius Foundation, and the Ford Foundation. It consists of over one thousand professionals from all over the world and every microfinance stakeholder group: practitioners, donors and investors, national and regional networks, technical assistance providers, rating agencies, academics and researchers, and others. SPTF is governed by a Steering Committee composed of leaders from a variety of stakeholder organizations (e.g., MFIs, investors, networks). Its mission is to engage with microfinance stakeholders to develop, disseminate and promote standards and good practices for social performance management and reporting.

commitment to some form of TBL reporting. This is distinct from the more limited changes required to deal only with ecological issues.

**The Client Protection Principles** describe the minimum protection microfinance clients should expect from providers by avoidance of over-indebtedness, transparent and responsible pricing, appropriate collections practices, ethical staff behavior, mechanisms for redress of grievances, and privacy of client data.

World Education Australia Limited referred **Principles of Sustainable Microfinance** which includes twelve principles mechanism: microfinance services must fit the needs and preferences of clients; poor households and communities need a variety of financial services, not just loans; microfinance is a powerful instrument against poverty, microfinance means building financial systems that serve the Poor; financial sustainability is necessary to reach significant numbers of poor people, interest rate ceilings can damage poor people's access to financial services; microfinance is about building permanent local financial institutions; microcredit is not always the answer; the government's role is as an enabler, not as a direct provider of financial services; donor subsidies should complement, not compete with private sector capital: lack of institutional and human capacity is the key constraint; the importance of financial and outreach transparency accurate, standardized, and comparable information on the financial and social performance of financial institutions providing services to the poor is imperative. MFIs supervisors and regulators, donors, investors, and more importantly, the poor who are clients of microfinance need this information to adequately assess risk and returns.

### **3.6 Frameworks of Mainstream Credit and Microfinance**

Many industries are struggling with DBL issues. Since few have yet found affordable or standardized answers, the classic qualitative client success story prevails as a proxy for social return. This section introduces a variety of measures and evaluation tools that can aid microfinance's DBL in particular, and social measurement in general.

**Table 3.1: Outside Microfinance Measurement Examples**

Name	Used By	Type	Microfinance Value
Balanced Scorecard	Business	Management Tool	Management-driven tool aligns mission, goals and performance
Data Envelopment Analysis (DEA)	Business	Management Tool for production	Management-driven tool aligns mission, goals and performance of production
Cost/Benefit Analysis	Government, Business	Monetization	Monetizes social factors, uses established models
Global Reporting Initiative	Socially Responsible Business	Reporting Mechanism	Terminology; industry standards approach; reporting tool for international business
Market Efficiency Audit	Socially Responsible Business	Reporting Mechanism, Monetization	Ratio to add transparency to donor contribution
Social Return on Investment (SROI)	US Non-profits	Monetization	Applies financial ratio formats for social measurement
Wealth of Nations Sustainability Index	International Development	Index	Visually represents complex information; indexes data

Describing the industry in comparable terms in order to infer performance and risk parameters was a necessary first step in the specialized evaluation of MFIs. Initially written with investors and funders in mind, MFIs found MicroRate reports useful for comparing their performance to that of their peers and for helping them to assess their management. Although the early evaluations may have accelerated the development of MFIs and helped shape the industry, initially they had little impact on funding flows.

<b>Mainstream Raters</b>	<ul style="list-style-type: none"> <li>▪ More emphasis on credit risk and solvency.</li> <li>▪ Benchmarking against the banking sector.</li> <li>▪ Main areas covered: capital adequacy; profitability; operational efficiency; liquidity risk; foreign exchange risk; credit management, organizational management and ownership; market position; projected cash flows.</li> <li>▪ Qualitative vs. Quantitative information: S&amp;P 50-50; Fitch Evaluations 50-50.</li> </ul>
<b>Specialized Raters</b>	<ul style="list-style-type: none"> <li>▪ More emphasis on portfolio structure and quality and operational risk and efficiency.</li> <li>▪ <u>Micro Rate</u> analyzes five areas of MFI performance and risk: microfinance operations; portfolio quality; management and organization; governance and strategic positioning; and financial performance. Qualitative vs. Quantitative information: 70-30.</li> <li>▪ <u>Planet Evaluation</u> methodology looks at: governance and decision making (20%); information and system (12%), risk management (12%); activities and services (25%); funding and liquidity (7%); and efficiency and profitability (24%). Qualitative vs. Quantitative information: 60-40.</li> <li>▪ <u>Microfinanza</u> covers: external context; governance and operational structure; financial products; assets structure and quality; financial structure; operational and financial results; strategic objectives and financial needs. Qualitative vs. Quantitative information: 50-50.</li> </ul>

**Balanced Scorecard (BSC<sup>22</sup>)** as mentioned earlier in quantitative review, a management tool also relevant for qualitative review is in use in corporations and US government. It tracks organizational behavior in four areas: financial, customer, internal business process, and learning. For each quadrant, management chooses goals, develops key metrics (indicators) for core activities, and compares performance with stated objectives.

**Data Envelopment Analysis (DEA)** approach as mentioned earlier that ratio analysis does not capture DEA efficiency. DEA efficiencies under different models and specifications; e.g., particular sets of inputs and outputs. This serves to explore what is behind a DEA score. The efficiency with which financial institutions conduct their business has long been studied (Thanassoulis 2001).

**Cost/Benefit Analysis (CBA)**- It analyzes proposed investments in relation to quantified benefits, projecting risk-adjusted return on investment scenarios. It uses an accounting framework to monetize costs and benefits in a standard format. It analytically enables dissimilar projects to be compared, including valuing difficult-to-measure items like the price of an ecosystem, to derive a best choice. For example, the US state of Vermont

<sup>22</sup> Robert Kaplan and David Norton of Harvard Business School developed the Balanced Scorecard in the 1980s. The tool was developed to provide private sector management deeper performance oversight in indicating performance rather than just financials.

conducted a weatherization project to insulate poor peoples' homes, decreasing energy costs and saving fuel. Its CBA concluded, "For every dollar spent, [the project] produces \$2 in reduced energy costs for the household and more than \$5 in total benefits during the life of the installed measures.

Opponents criticize its value calculations, which do not recognize human factors or equality issues. Also, CBA's techniques are specialized and frequently expensive, and assumptions may be contentious because of incorrect information. CBA is interesting for microfinance's DBL as it demonstrates accepted models with priced, comparable social behaviors.

**Global Reporting Initiative (GRI)** publishes social responsibility guidelines to establish uniform reporting standards. The guidelines set variables, discuss how to measure them, and specify data-presentation formats. Indicators are split into topic areas: economic, environmental, social, human rights, and workplace. The guidelines are used voluntarily to report on the economic, environmental, and social dimensions of a company's activities, products, and services, and assist organizations and stakeholders in articulating and understanding their impacts (Global Reporting Initiatives, 2009). The GRI framework is similar to accountings of FASB, with an independent industry-oversight board that recommends procedures and enacts changes to guide unified standards. This study also looks for a uniform standard considering the existing debate<sup>23</sup> between US GAAP and IFRS (William & Lawrence, 2009).

GRI's strengths are in its evolving framework of guidelines and methods. It includes stakeholders and addresses sustainability issues. Its goals—transparency, trend analysis, and incremental improvement—fit well with MFI's best practices. However, most of its metrics are qualitative and emphasize outputs over outcomes. GRI lacks binding participation, a direct link to management behavior, and compliance mechanisms.

**Market Efficiency Audit (MEA)** is a by-product of David Korten's research on corporate public subsidy research that builds on the social audit, a process mirroring a financial audit. Just as independent evaluators investigate a company's financial performance, MEA advocates the same for social and community behavior.

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<sup>23</sup> The SEC responded by admitting the policy salience of comparability and doubling its bet on IFRS: it has produced a new "Roadmap" that describes a process leading to mandatory use of IFRS by domestic issuers by 2014. The Roadmap bypasses an alternative, more painstaking route to convergence—a longstanding joint project of the FASB and the IASB directed to the articulation of a common set of accounting standards.



Korten proposes two innovations. First, social metrics should be included with—and treated equally with—financial information. Second, MEA proposes measuring how much or little public subsidy an entity has, highlighting any contradictions between companies that advocate free markets while operating with direct or indirect public subsidies (Korten, 1997). The microfinance equivalent is the Subsidy Dependency Index (SDI) which describes what MFIs should charge to cover true costs and achieve break-even.

MEA is more easily understood than SDI: Subsidies can be seen in dollars, with a percentage derived by dividing subsidy amount by total sales. The lower the subsidy percentage, the more that entity bears the full market cost of its activities.

MEAs major strength is that its concluding numbers and percentages are straightforward; however, it is not in use today and lacks a mechanism for compliance. Also, MEA is markedly unfair to social enterprises that use government programs to accomplish social impacts. MEA also contains “gray areas” open to interpretation.

**Social Return on Investment (SROI)** identifies three types of value creation: economic, socio-economic, and social. Roberts Enterprise Development Fund (REDF), the SROI leader, has developed a measurement model that quantifies impact using traditional investor-oriented ROI but considers a program’s cost savings and social return, rather than actual revenues, as the analyzed cash flows (Emerson, 2001). Where causality is less sure, probability discounts can be taken as a fraction of value created.

**Wealth of Nations Triangle Index (WTI)** measures a nation's sustainable economic and social development potential and the factors blocking development, and relates this to other countries. The index comprises three categories—economic environment, social environment, and information exchange—portrayed visually as the legs of an equilateral triangle.

One of the root causes of the Asian financial crisis was the failure in corporate governance. Consequently, there has been a surge of interest in the principles of good **Corporate Governance Principles for Business Enterprises** (ADB 2003). Private sector enterprises will increasingly discover that traditional financial performance will be insufficient to attract investors if they do emphasis on performance orientation, nomination and compensation committees, disclosure, audit committee, code of conduct,

conflicts of interest, environmental and social commitment, conduct of the board of directors, responsibilities of investors, and the role of directors in turnaround situations.

**ISO 26000** is intended to assist organizations in contributing to sustainable development. It is intended to encourage them to go beyond legal compliance, recognizing that compliance with law is a fundamental duty of any organization and an essential part of their social responsibility. It is intended to promote common understanding in the field of social responsibility, and to complement other instruments and initiatives for social responsibility, not to replace them.

### **3.7 Findings from Literature Review**

#### **3.7.1 Findings from Variables Review**

As discussed above, the selection of approaches for the selection of variables should be logical and should have research appeal. Considering this, multivariate data reduction method may be selected which usually involves principle component analysis where a series of different linear combinations of financial ratios is constructed in such a way that the information loss of multivariate data is minimized (Johnson and Wichern 1982). Before that potential variables should be selected after screening and avoiding duplication.

#### **3.7.2 Findings from Weighting Review**

As discussed above, the selection of approaches for the selection of weighting should be logical and should have research appeal. Considering all these, Taylor expansion of the logit model may be selected where there is a research appeal. The first derivative of the logistic function equals  $K \beta_i$  where  $K$  is a number that depends on the point at which the derivative is evaluated.

Based on the above review, it can be said that in finding out a suitable weighting system for the evaluation of MFIs one option is to use a formula that explicitly weights each measure. Potential difficulties with this option include determining the appropriate weights to place on each measure, the “game-playing” associated with any formula-based plan, the possibility that ratios will be determined even when performance is “unbalanced” (i.e., overachievement on some objectives and underachievement on others), and the likelihood that all relevant dimensions of managerial performance are not captured by the selected performance measures (e.g., Holmstrom and Milgrom 1991,

Baker *et al.* 1994, Kaplan and Norton 1996).

A second option is to introduce subjectivity into the bonus award process. This subjectivity can take the form of flexibility in weighting quantitative performance measures when computing a manager's bonus, the use of qualitative performance evaluation, and/ or the discretion to adjust bonus awards based on factors other than the measures specified in the bonus contract.

Some theoretical work indicates that greater subjectivity can improve incentive contracting because it allows the firm to exploit noncontractible information that might otherwise be ignored in formula-based contracts, and to mitigate distortions in managerial effort by "backing out" dysfunctional behavior induced by incomplete objective performance measures (Baker *et al.* 1994, Baiman and Rajan 1995). However, other research suggests that subjectivity in reward systems can lower managers' motivation by allowing evaluators to ignore certain types of performance measures that are included in the bonus plan, permitting bonus payout criteria to change each period, and introducing favoritism and bias into the reward system (e.g., Prendergast and Topel 1993). As a result, managers will be less able to distinguish what constitutes good performance, less likely to believe that rewards are contingent on performance, and less convinced that performance criteria are being applied consistently across the organization.

Drawing upon economic and psychological studies on the choice of performance measures for performance evaluation and compensation purposes, study develop exploratory hypotheses regarding the weights placed on different types of performance measures (e.g., financial versus nonfinancial, quantitative versus qualitative, and input versus outcome) in subjective bonus computations.

Although Kaplan and Norton (2001) cite the GFS bonus plan as an example of a scorecard-based reward system that prevented managers from underperforming on any of the scorecard dimensions, researchers find that the use of subjectivity in weighting the scorecard measures allowed supervisors to ignore many performance measures, even though some of these measures were leading indicators of the bank's two strategic objectives (financial performance and growth in customers). Instead, short-term financial performance measures become the primary determinant of bonuses. In addition, a large proportion of branch managers' performance evaluation was based on factors *other than* the scorecard measures, even though discretion to consider other factors was not a

component of the bonus plan. The move from the formula-based system to the more subjective scorecard led many branch managers to complain about favoritism in bonus awards and uncertainty in the criteria being used to determine rewards, and caused corporate executives and human resource managers to question the scorecard's use for compensation purposes. The scorecard plan was abandoned at the end of 1998 in favor of a commission-style system based on revenues.

Some studies make four contributions to the performance evaluation and compensation literature. First, extending cross-sectional studies on the use of subjectivity and discretion in bonus plans (e.g., Murphy and Oyer 2001, Gibbs *et al.* 2002). Second, providing further evidence on the influence of informativeness on performance measure weighting. Earlier studies on the relative weights placed influence on financial and nonfinancial performance measures (e.g., Bushman *et al.* 1996, Ittner *et al.* 1997) generally include proxies for the noise in financial measures, but do not include direct measures of the informativeness of nonfinancial measures due to data constraint. Third, complementing psychology-based experimental work on the importance placed on various types of performance measures by examining whether their experimental results hold in an actual performance-evaluation setting. Fourthly, providing one of the first detailed studies of scorecard-based compensation plans.<sup>24</sup>

Finally, it may be recommended that in determining the weights takes advantage of the linear portion of the logit model. Ignoring the intercept terms, the linear portion is a weighted sum of the bank's financial data. It might be noted that this method is closely related to a Taylor expansion of the logit model. The first derivative of the logistic function equals  $K \beta_i$  where  $K$  is a number that depends on the point at which the derivative is evaluated. However,  $K$  is the same for all variables. Thus, the first term in a Taylor expansion about the point  $x^B$  is  $K \beta_1 (x_1^A - x_1^B)$ , and the total is  $K \beta (x^A - x^B)$ . Bank A (with financial data  $x^A = x_1^A, x_2^A, \dots, x_{12}^A$ ) and Bank B (with financial data  $x^B = x_1^B, x_2^B, \dots, x_{12}^B$ ). The difference in the measure of financial strength of the two banks is  $\beta x^A - \beta x^B = \beta (x^A - x^B)$ . The first variable accounts for  $\beta_1 (x_1^A - x_1^B)$  of this difference, or, in percentage terms:

<sup>24</sup> See Malina and Selto (2001) and Campbell *et al.* (2002) for field-based studies examining other uses of the balanced scorecard. Also, see Banker *et al.* (2000) for field evidence on the implementation of a compensation plan incorporating nonfinancial measures.

$$\frac{100 * \beta_1 (x_1 - x_1)}{\beta (x^A - x^B)}$$

### 3.7.3 Findings from Financial Modeling Review

In general, MFIs activities are similar, except for the size of operations and the target segment though there are differences in program portfolios. Therefore, keeping in mind the stage of evolution of the MFIs, this study investigates the method of selecting the variables and finally recommended a way for reducing the variables and determining the preliminary variables. From the review of the weighting for the variables for the quantitative and qualitative aspects of the MFIs in the context of MFIs mission, the study also recommended a specific method of Taylor expansion of logit model. After the rigorous review of the financial model for the formal as well as for the informal sector, it appears that no single model or strategy will be suitable for the model of the MFIs for its diversification uniqueness and dimension of the MC. The simplest way of modeling for evaluating MFIs is to examine the financial as well as nonfinancial aspects using the financial ratio and responses individually to calculate a cut off score for each area on the basis of minimizing misclassification errors. So it could be a possible way of developing a model for evaluating the MFIs.

In the formal sector a good number of studies were conducted relating to predicting bankruptcy during the 1960s, 1970s and 1980s. Since the work of Beaver (1966) and Altman (1968) there has been seen a considerable interest in using financial ratios for predicting financial distress in companies. Using univariate analysis, Beaver concluded that cash earnings to total debt was the best ratio for signaling bankruptcy and Altman (1968, 1977) pioneered the use of multiple discriminant analysis in predicting bankruptcy. Since then, discriminant analysis has become a standard approach for predicting financial distress. However, it has been criticized due to its restrictive assumptions (Karels and Prakash 1987) as it requires a linear separation between the distressed and healthy firms and the ratios are treated as independent variables.

Gonzalez (1999) attempts to put together the micro and macro data and generate the probability of bank failure by employing Fixed-Effects Logit model for panel data. However, Kulkarni (2005) restricts to micro approach because incorporating macroeconomic variables

into the analysis is much more tedious and costly. It would also be more difficult to identify the correct macro variables to be incorporated in the given framework. Furthermore, it is not clear that using the macro variables will produce more accurate forecasts than the bank-wise financial variables.

Non-linear models, such as the logit (Martin 1977) and the probit (Amemiya and Powell 1983), were used not only for classification but also for estimating the probability of bankruptcy (McFaden 1976, Press and Wilson 1978, Ohlson 1980 and Lo 1986). However, these models also contain several limitations. First, the choice of the regression function has a strong bias that restricts the outcome. Second, these methods are very sensitive to exceptions, which are very common in bankruptcy prediction with atypical firms seriously compromising the predictions. Third, although these methods may achieve low errors on the sample data, they perform badly on generalization.

Non-parametric models (Stein and Ziegler 1984, Srinivasan and Kim 1987) or linear programming (Gupta, Rao and Bagchi 1990) have also been applied for bankruptcy classification, while a more recent avenue of research is the use of neural networks.

During the study it has been revealed that a number of pioneer research were done in the formal sector (Horrigan 1966, Pogue and Soldofsky 1969, Pinches and Mingo 1973, and Kaplan and Urwitz 1979) that investigated the determinants of bond ratings. Later, Kaplan, Anttony and Atkinsons (2007) worked on total performance approach. They specially studied the usefulness of financial information for predicting ratings. They indicated several statistical multivariate techniques to study the relationship between accounting information and the rating assigned.

Most recent study done by Poon (2003) concentrated on more specific issues of the rating process. He found that unsolicited ratings present worse assessments than solicited ones. Morgan (2002) examines the banks' opacity from the lack of consensus among main rating agencies.

Study found that MFIs need to analyze the scale, their activities and the depth of outreach. A performance assessment framework introduced by Yaron (1992) consists of two primary criteria: the level of outreach achieved among target clientele and self system of the MFIs. Different indicators are used to measure scale, outreach and growth, such as total asset, gross loan portfolio and total asset growth.

Outreach indicators are taken as proxies for development impacts of microcredit programs, assuming that self-sustainable financial institutions are likely to contribute to income expansion and poverty reduction - that is, the output of efficient rural financial intermediation leads to the desired development impact (Yaron, McDonald and Piperk 1997). The twin criteria of outreach and self-sustainability have become the yardstick of microcredit program evaluation (Yaron 1992a, 1992b, Christen, Rhyne and Vogel 1995, Chaves and Gonzalez-Vega 1996, Mahajan and Ramola 1996).

Empirical literature recognizes the relevance of company size as an explanatory variable of rating. Larger MFIs are supposed to have better capability to meet their commitments. So the question whether there is a positive and significant relationship between MFI size and rating assigned is answered by the above discussion. A study conducted by MIX market (2009) also identified sustainability, Target market other for analyzing an MFI.

Most of the studies found a significant relationship between profitability variables and ratings (See Pogue and Soldofsky 1969, Pinches and Mingo 1973, or Poon, Firlt and Fung 1999). Companies with better returns will have more capacity to meet their financial obligations, and therefore, get a good rating. PKSF also identified these variables and areas for the analysis of portfolio quality.

Different studies on rating research have traditionally employed different multivariate statistical techniques: Factor Analysis (Pinches and Mingo 1973); Discriminant Analysis (Mangiameli and West 1999); Multidimensional Scaling (Molinero et al, 1996); Ordinal Regression (Poon et al, 1999) and Spearman's coefficient correlations and an Ordinal Regression (Cinca 2006). These studies found that there is a positive and significant relationship individually between MFI size, MFI profitability, MFI productivity, and rating assigned, whereas there is a negative relationship with MFI risk and no significant relationship between MFIs social performance and rating assigned. Tests of statistical significance show that all the above variables are closely related to the five CAMEL areas.

Many MFIs obtain funds from the market (loans) or receive grants. Other issues become relevant in the selection of inputs and outputs. For example, some MFI receive subsidized loans at an interest rate that is below the market rate. It follows that the selection of inputs and outputs is crucial in the financial institution modeling. Berger and Humphrey (1997)

suggest that one could assess efficiency under a variety of output/input specifications, and see the way in which calculated efficiencies change as the specification changes. This is sensible, but they do not provide guidelines on how to choose between specifications. In fact, specification searches are common in the modeling of financial institutions; examples are Oral and Yolalan (1990), Vassiloglou and Giokas (1990), and Pastor and Lovell (1997).

A major problem with the selection of inputs and outputs in a DEA model<sup>25</sup> is that there is no statistical framework on which significance tests can be based. The neat approach of variable selection that is used in regression, based on t statistic values, has no parallel in DEA. One may be tempted to use as many inputs and outputs as one may think to be relevant, but some of them will be correlated, perhaps highly so.

Here we will use the model specification methodology suggested by Serrano Cinca and Mar Molinero (2004). This, in essence, consists in calculating efficiencies for every possible combination of inputs and outputs. A two way table is obtained in which the columns are output/input specifications and the rows are decision units (MFIs).

#### **3.7.4 Findings from MFI Modeling Review**

There are a number of agencies (CERISE, Microfinaza) for MFIs rating which surveyed to find out a specific social assessment technique. Combining qualitative and quantitative sampling, data collection, and analysis techniques in Mixed-Method studies by Sandelowski and Barroso (2002), this social rating considers the MFI adherence to its social mission, the depth of outreach to low income clients, and the suitability of products to client needs.

Finally, it is observed that there are too many small rating firms that employ different methodologies and puzzling rating scales. As Levich et al (2002) point out, "U.S. currently has three general-purpose bond rating firms and has never had more than five in operation at any given time." In contrast, now-a-days there are about two dozen MFIs rating agencies. For rating firms, reputation is a key issue (Jansson 2003); and unknown

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<sup>25</sup> Data envelopment analysis (DEA) is a nonparametric method in operations research and economics for the estimation of production frontiers. It is used to empirically measure productive efficiency of decision making units (or DMUs). One can also combine the relative strengths from each of these approaches in a hybrid method (Tofallis, 2001) where the frontier units are first identified by DEA and then a smooth surface is fitted to these. This allows a best-practice relationship between multiple outputs and multiple inputs to be estimated.



small companies can hardly obtain reputation in their business. Moreover, agencies assign letter grades for rating and the same letter grades may have different meanings depending on the rating agency. This is misleading. We agree with the opinion that now-a-days specialized microfinance ratings are hard to compare (Tulchin 2003, Meehan 2005). After having examined the different methodologies, there are critics that most of them have been built adopting banking grades and not taking into account specific microfinance issues, missing the assessment of its social performance. Study found that a ranking system caused chaos in this sector by developing a rank for every individual variable. MIX market have selected nine areas of evaluation as performing indicators and developed nine list of top performing MFIs.

Microfinance rating in Bangladesh by INAFI<sup>26</sup> and CRISIL<sup>27</sup> is still in the stage of getting a complete shape in terms of its methodology. In the recent past, other initiatives were undertaken to gather and analyze financial performance data from POs which include the development of a rating agency by ACCION's CAMEL,<sup>28</sup> the Private Sector Initiatives Corporation (PSIC); the Economics Institutes' Micro Banking Bulletin Project, headed by Robert P. Christen and funded by the World Banks' Consultative Group to Assist the Poorest (CGAP); the BASE<sup>6</sup> Kenya Micro Finance Institution (MFI) Monitoring and Analysis System, funded by the British Department for International Development (DFID), formerly the Overseas Development Administration (ODA); and the PEARLS<sup>29</sup> rating system, as used by the World Council of Credit Unions (WOCCU). Parallel to these, efforts have also been made for creation of several guides to gathering financial performance data, including the GEMINI project's 1995 publications on "Financial Management Ratios," by Margaret Bartel, Michael McCord, and Robin Bell; Robert P. Christen's *Banking Services for the Poor: Managing for Financial Success*; the Small Enterprise Education and Promotion (SEEP<sup>30</sup>) Networks' 1995 Financial Ratio Analysis

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<sup>26</sup> INAFI International Network of Alternative Financial Institutions is a Microfinance Network in Senegal.

<sup>27</sup> Credit Rating and Information Services of India Ltd. (CRISIL) (BSE: 500092, NSE: CRISIL) is the India's leading Ratings, Research, Risk and Policy Advisory Company based in Mumbai.

<sup>28</sup> The ACCION CAMEL developed a Technical Note by Sonia B. Saltzman and Darcy Salinger, ACCION International. The note reviews and rates five areas of qualitative and quantitative aspects of the MFIs: Capital Adequacy, Asset Quality, Management, Earnings, and Liquidity Management.

<sup>29</sup> PEARLS uses a set of financial ratios to monitor the financial stability of the credit unions within WOCCU's developing movement projects. Methodology: Each letter in the word PEARLS measures the key areas of credit union operations: Protection, Effective financial structure, Asset quality, Rates of return and costs, Liquidity and Signs of growth.

<sup>30</sup> The SEEP Network is a nonprofit network of over 120 international organizations, which believe in the power of microenterprise to reduce global poverty.

of Micro-Finance Institutions; the Inter-American Development Bank's 1994 Technical Guide for the Analysis of Microenterprise Finance Institutions; and Women's World Banking's Principles and Practices of Financial Management. As worldwide data is amassed, a set of accepted standards and peer groups will emerge. A number of institutions and individuals are currently coordinating efforts to develop common adjustments to financial statements and common ways of measuring key indicators to further develop standards for the microfinance industry.

A number of authors and organizations have contributed significantly which include F Kader of PKSF (1998); Salzman and Salinger of ACCION International (2000); Emmanulle Javoy of Planet Finance (2005); Evans of World Council of Credit Unions; Damian Von of GMRA (2006); Pilot Project (Samriddhi- Enrich) on total approach- PKSF (2010); R. Kaplan, and D. Norton. The Balanced Scorecard, Harvard Business School Press, 1996; GIRAFE<sup>31</sup> by Emmanulle (2001); Javoy of Planet Finance (2003); PEARLS by Evans of World Council of Credit Unions (2004); Micro Rate of GMRA by Damian Von (2006); MIRACLES<sup>32</sup> by Safdar Kazi of JCR-VIS (2007), Financial Ratio Analysis for MFIs by SEEP (2006); Management Information System for MFIs by CGAP<sup>33</sup> (2007); MICROS<sup>34</sup> by CRISIL (India); Micro Banking Standard by CGAP/IDB; MIX Asia 100 of ADB/MIX (2009) ; M-CRIL by Sanjay Sinha (2005); The Philippine Coalition for Microfinance Standards (2003); Microfinanza (2004) ; Feller rating (Chili) ; Fitch Rating (USA); and Pacific Credit Rating (Guatemala).

Moreover, this studies the areas of Corporate Good Governance (CGP), Principles of Business Enterprises by ADB and Hermes (2003); Corporate Social Responsibility (ISO 26000); Corporate Ethics (CFA Institute 2005); the six principles<sup>35</sup> of the client protection campaign (CGAP) where all the principles in the context of business organisation are explored to identify the potential variables for qualitative aspects; Microfinance's Double Bottom Line Measuring Social Return for the Microfinance Industry By Drew Tulchin;

<sup>31</sup> Planet Rating's proprietary GIRAFE methodology is an innovative and unique analytical rating approach to evaluate MFIs performance and institutional risks. There are six areas of assessment: Governance, Information and systems, Risks management activities. Funding and liquidity and Efficiency and profitability.

<sup>32</sup> Based in Pakistan JCR-VIS assigns local currency ratings on a national scale. It uses a methodology called MIRACLES, the acronym for Management, Information Systems, Reputation, Asset quality, Capital, Liquidity, Earnings and Supervisory systems (internal and external).

<sup>33</sup> Funder of MicroBanking Bulletin/ MicroBanking Standards Project. Stands for Consultative Group to Assist the Poorest (CGAP).

<sup>34</sup> CRISIL's methodology with six indicators: Management, Institutional Arrangement, Capital Adequacy and Asset Quality, Resources, Operational Effectiveness, and Scalability and Sustainability.

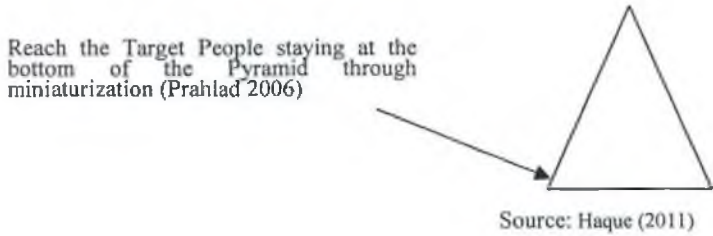
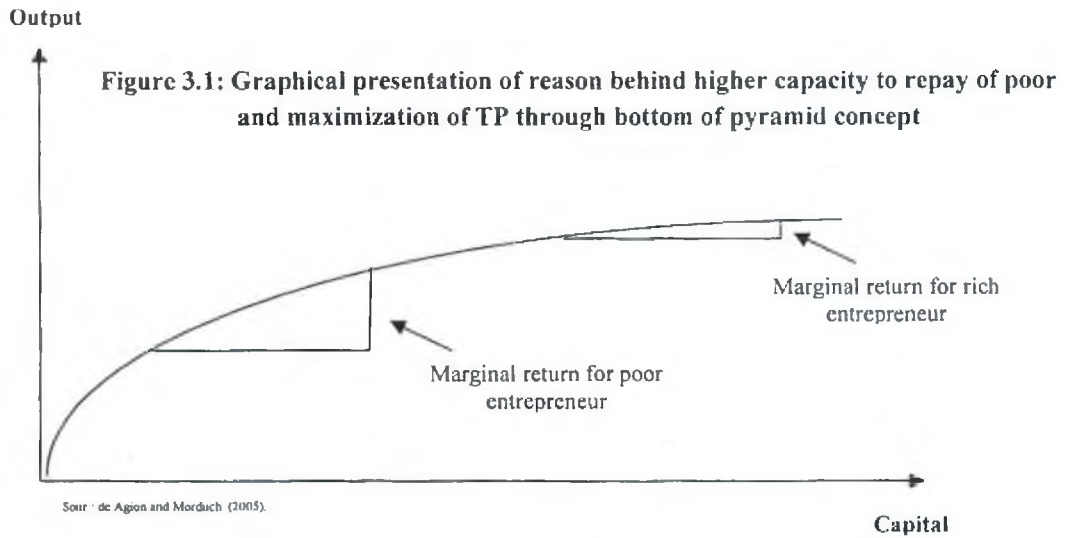
<sup>35</sup> The six principles of the client protection campaign are avoidance of over-indebtedness; transparent pricing; appropriate collections practices; ethical staff behavior; mechanisms for redress of grievances and privacy of client data. Different business models like Hermes' Approach and ISO 26000 have been used these principles to derive the major areas and variables.

Sharma, 2004a) 2004b) 2004c) 2005a) 2005b) 2005c) 2007a) 2007b) Stakes of Measuring Social Performance in Microfinance François Doligez, IRAM1-University of Rennes 1 and Cécile Lapenu, CERISE2 November 2006; M. Pitt and S. Khandker, 1999: Household and Intra household Impact of the Grameen Bank and Similar Targeted Credit Programs in Bangladesh, World Bank Discussion Paper, 320; CERISE, 2005: Social Performance Indicators Initiative uses the potential variables from which 14 are selected after screening and avoiding duplication. Microcredit Program Evaluation: A Critical Review by Shahidur R. Khandker reviews the methodologies practiced to evaluate microcredit programs, provides a unified framework for analysis, and discusses future research directions.

The Social Performance Task Force of CERISE defines social performance as “the effective implementation of an institution’s social mission into practice. This mission may include serving larger numbers of poor and excluded people; delivering high-quality and appropriate financial services; creating benefits for clients; and improving the social responsibility of an MFI” (Hashemi 2007). This notion, at the very heart of microfinance’s mandate (“do good”), goes beyond the concept of social responsibility (“do no harm”). Social responsibility applies to all economic sectors and refers to an organization’s responsibility for the impact of its decisions and activities on society and the environment through transparent and ethical behavior (Gendron, 2009).

### **3.7.5 Conceptual Framework of the Study**

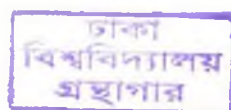
The conceptual framework (Figures: 3.1 and 3.2) of the study is based on a couple of economic and management theories like “agency theory” which justifies the rationales of interventions of the principals, and “diminishing returns principle” which justifies that the poor entrepreneur has greater return on his unit of capital and is willing to pay higher interest rates than the rich entrepreneur and finally lack of proper management and universal approach of judgment of the MFIs may generate debate and criticism against MC. Prof. C.K. Prahlad (late), a management guru of Indian origin, advised multinationals in the USA and other western world to target the markets at the “bottom of the pyramid” to increase sales through miniaturization of consumer goods which fits the intention of the MFIs to reach the poor (Haque 2011).

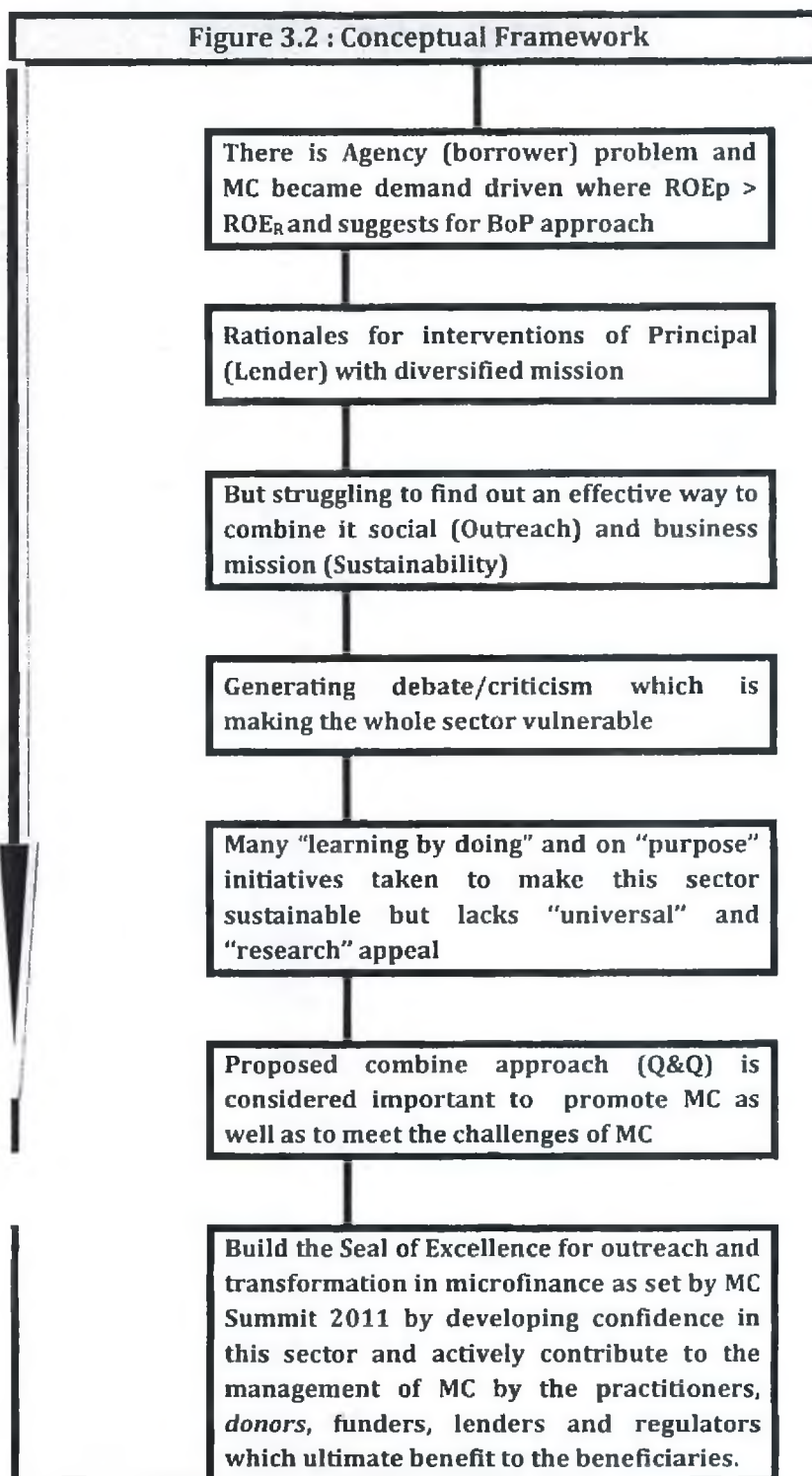


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### 3.8 Methodology

This section describes the concepts, the steps and process used to conduct the study. The study was conducted under two major aspects: quantitative (Level I) and qualitative (Level II) aspects (Figure 3.3). The model for quantitative aspects is derived by processing the variables LDA through SPSS. The variables are derived by exploring the preliminary variables and areas selected through factor analysis and weighted for the areas by using logit model. These variables are grouped under the five major areas of CAMEL. The indicators are either *quantitative* or *qualitative* then weighted as per their respective weights derived.





The model for qualitative aspects is derived by processing the variables LDA through SPSS. The preliminary variables are derived by using different business models and approaches which are used in the questionnaire. The survey is conducted through the Concerned Officer/Desk Officer (CO/DO) and the audit officers of PKSf to get the feedback for the selected variables and areas which is reduced later through factor

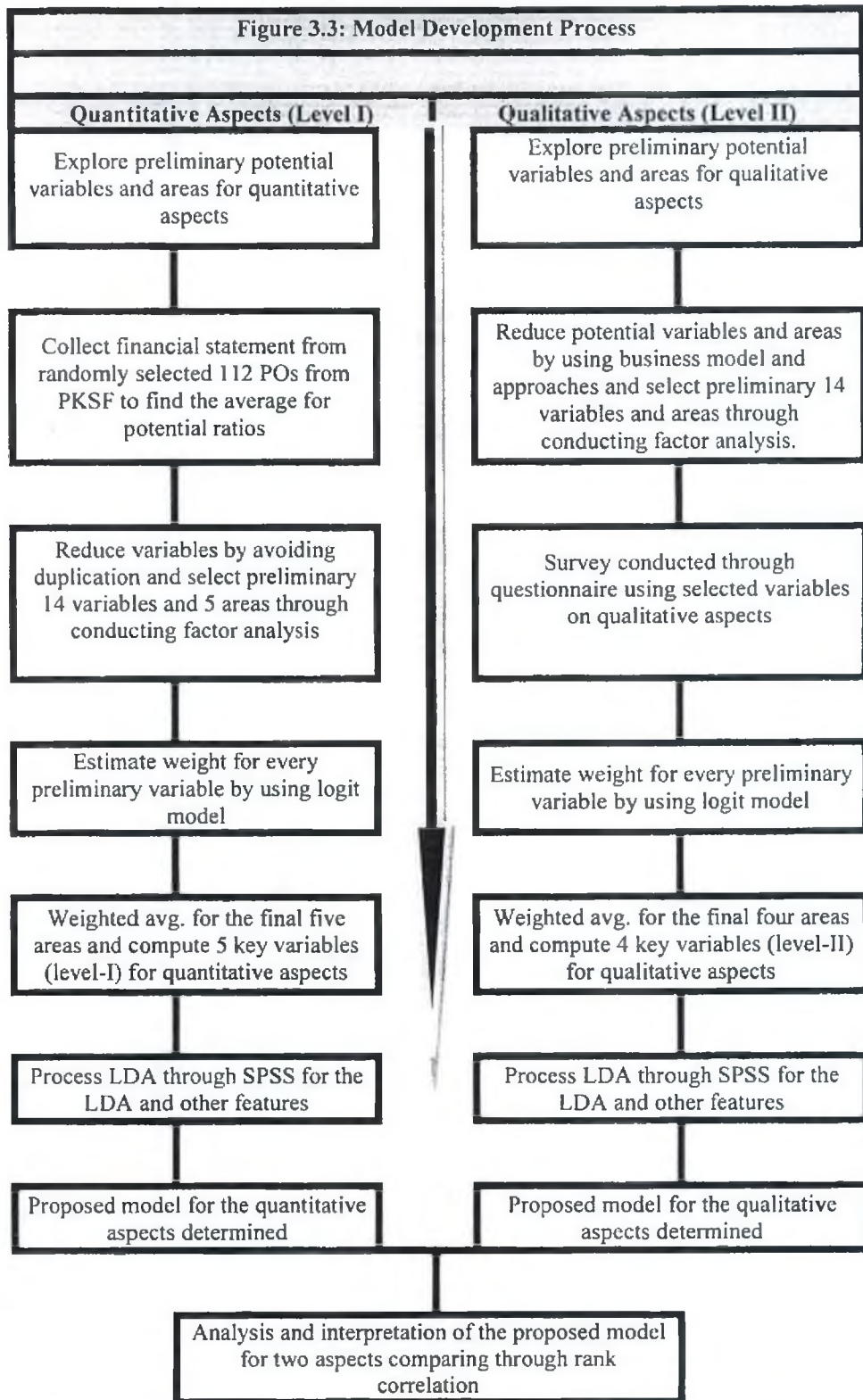
analysis and weighted for the areas by using logit model. These variables are grouped under the five major areas of CAMEL. The variables are either *quantitative* or *qualitative* and each is given a weighting. While 15 preliminary variables are selected and weighted for the five areas of CAMEL for quantitative aspects then 14 preliminary variables are selected and weighted for four areas (Ex. SR, PR and GG.) of qualitative aspects.

### **3.9 The Proposed Model Analysis Process**

In the first stage of the study initiatives are taken to develop a model for MFIs in terms of quantitative aspects. For this we identify potential areas and variables in evaluating MFIs by exploring the literature and avoiding duplication. Selected variables and areas are reduced through Factor Analysis and mean of preliminary variables for big and small POs are determined and standardized for computation of weight by using Logit model. By processing the weighted values of major areas for LDA (Linear Discriminant Analysis) we derive the model and its feature for quantitative aspects.

A total of 112 randomly selected Partner Organizations (POs) of PKSf working in two major categories naming BIPOOL (Big Partner Organizations working in Large area) and OOSA (Organizations Operating in Small area) are considered and their individual financial statements are used in determining the final variables considering the aspects do matter in evaluating financial performance of MFIs.

For assessing the financial performance secondary data is used and this data are taken from the financial statements and policy guideline followed by the PKSf and its affiliates. PKSf affiliates require maintaining financially viable standards.



The weighted values are considered as the final variables and processed for Linear Discriminant Analysis (LDA) to derive the financial performance score and the financial model for MFI.

In the second stage of the study, a model is developed by using the qualitative aspects. We identify potential areas and variables which matter in evaluating MFIs for qualitative aspects by exploring the literature. Potential variables and areas are reduced after screening by different business models and concepts such as Hermes' Approach and ISO 26000. By using different business concepts we determined the mean of preliminary variables for big and small POs and computed the weight by using Logit model. After processing the weighted values and major areas for LDA (Linear Discriminant Analysis), we derive the model and its feature for the qualitative aspects. Then the score for the two aspects is compared by using the Rank Correlation which will determine the significance of the two aspects.

In the third step we compare the two models and check whether these two aspects have got any relationship and do matter in performance grading or not.

Finally, we verify the model with other real data.

### **3.10 The Contextual Factors Considered in Conducting the Study**

#### **3.10.1 Demography of the MFIs**

PKSF POs network gives the apex organization an unparalleled strength in implementing its various activities aimed at poverty alleviation through employment generation and giving it access to all districts (Figure 3.4) in the country. PKSF has been very focused on ensuring that strict procedures are followed for enrollment of new POs. It carries out due diligence and field level assessment, among other initiatives, to ascertain that potential organization become PKSF's PO.



Figure 3.4: Mapping of PO working area (As on 2010)



**Eligibility Criteria for POs**

The Rating Fund is available to those POs that have provided financial services for more than three years in some institutional form. The Fund would apply to transformed POs as well as NGOs. Strong preference would be accorded to POs that commit to (i) a full public disclosure of its adjusted financial statements and the rating/assessment report, and (ii) a short feedback opinion on the rating/assessment. POs in all of the world's regions, except those in industrialized countries, are eligible to apply.

### **Eligibility Criteria for Assessors/Raters**

Eligible assessors include qualified microfinance assessment organizations, consulting firms and individuals, as well as professionally recognized international rating agencies. Locally based rating/assessment agencies, as well as organizations that are in partnership with local rating institutions, will be encouraged to apply. Potential assessors/raters need to demonstrate:

That they, or their leading personnel, have analyzed the financial statements and overall performance of at least 8 POs over the last 5 years. They should include copies of the three most recent of these reviews in their application. These reviews will be treated in a confidential manner, and destroyed subsequent to evaluation by PKSf. That they can perform the basic types of financial statement adjustments routinely practiced in PO appraisals.

That their rating/assessment methodology covers main microfinance risk areas, such as governance, assets quality, MIS and internal control, financial analysis, and liquidity. A steering committee will qualify raters/assessors based on their track records and the above criteria. Continued qualification of raters/assessors would depend on the quality of the assessments they produce using this method. A mechanism will be established to obtain PO's feedback and review the appropriateness of raters/assessor's methodologies.

### **Application Instructions**

POs that wish to qualify for funding for a rating/assessment exercise should apply through a simple letter to the PKSf with the following information enclosed:

- One-page institutional summary highlighting operational results to date and demonstrating that the PO meets the requirements stated above.
- Copy of the latest year financial statements including the external auditor's report (if any).
- Copy of reports arising from rating, evaluation, appraisal, or other reviews by external consultants over the last 24 months.
- An estimate from the proposed rater/assessor as to the total cost of carrying out the exercise. PKSf will use regional reference criteria to evaluate the cost estimate. If the estimate seems inappropriate, PKSf reserves the right to ask the PO to request bids from other qualified raters.

Specify whether funding is for (i) a rating (an analytical report with a specific grade) or

(ii) an assessment (an analytical report without any specific grade).

A written commitment to provide the rater/assessor with sufficient information so that the adjusted financial statements are in compliance with the PKSF Financial Statement Disclosure Guidelines; and a written commitment on the part of the rater/assessor to certify whether or not the adjusted financial statements meet that requirement. A written commitment to (i) full public disclosure of its adjusted financial statements and the rating/assessment report, and (ii) a short feedback opinion on the rating assessment.

### **3.10.2 Ethical Factors**

In this study the ethical standards are maintained in every step in both way of means and ends. In the case of data collection for the quantitative and qualitative aspects, the maximum effort has been made to maintain the ethical standard as well as the quality of the data. Moreover, during preparing the manuscript it is tried level best to pay credit to those who contributed to this MC sector.

### **3.10.3 Collected (Audit) Report Factors**

Auditors conducted audit of the PO in accordance with Bangladesh Standard on Auditing (BSA) which are consistent in all material respects with Bangladesh Accounting Standards and International Accounting Standards/International Financial Reporting Standards (IAS/IFRSs) as adopted in Bangladesh. Those standards require that auditors plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit also includes examining on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the Accounting Principles used and significant estimates made by management as well as evaluating the overall financial statements presentation. The auditors believe that the audit provides a reasonable basis for the team opinion.

#### **Auditor's declaration**

According to the auditors, the financial Statements referred to the report, prepared in accordance with Bangladesh Standards (BAS), give fair view of the state of the affairs of the PO and of the results of its operations and its cash flows for the year then ended and comply with all applicable laws and regulations including PKSF guideline.

The auditors also declare that

- a) They have obtained all the information and explanations which to the best of the auditors knowledge and belief were necessary for the purpose of auditors audit and made due verifications thereof.
- b) PKSF guideline has been followed by the PO, so far as it appeared from the auditor's examination of those books.
- c) From the auditors point of view, the balance sheet, the income statement, cash flow statements and receipts and payment statements deal with by the report are agreement with the books of accounts.

### **Notes and disclosures of the audit report**

The report contains information on background of the organization (PO), which includes a history of the organization, programs that the POs are running, its affiliation, legal status structure and operations of the PO. In addition to that the report contains corporate information which includes the information of the board of directors such as, number of executive meetings during a year, date of last AGM held, list of EC members. Moreover, the report notes on basis of accounting, summary of significant accounting policies, significant organizations policies such as, loan loss provision, loan classification, write off policies, policy on loan to beneficiaries, policy on savings collection and interest rate, status on grant/donation policy of accounting etc. Other than the routine information of MC program, the report gives the status on fixed asset, investment, LLPI, DPO, savings, DFI, risk fund, interest receivable on FDR, grants receivable from PKSF, retained surplus etc. The annexure of the report includes eligibility criteria, compliance certification which contains the status of the prescribed ratios of the PO, portfolio report includes loan classifications and provision, loan operational report includes the information of the staffs, schedule of fixed asset; management report on the accounts of the PO contains the overall review of the PO's FS, observations and recommendations implemented for the previous year observations and recommendations for the year to be implemented, and review of the internal control system ensuring accountability and transparency.

### **3.11 Necessary Conditions for the Effective Study**

The study requires the following conditions to make it effective.

#### **3.11.1 Transparency and Availability of Information**

The depth and quality of a survey depends mainly on the availability of qualitative

performance information. Availability of the information also rests on two factors: (1) PO's ability to provide information, and (2) PO's willingness to provide information.

Effort should be taken to match the ability to provide information flows primarily from institutions management information systems (MIS). The MIS is to provide accurate and timely information and be sufficiently flexible so that a variety of meaningful reports can be generated. It is due to the fact that, in some areas, the model might require reports that the financial institution has never generated before and its MIS might not be able to automatically respond to the information requests.

The willingness of an institution to provide information to evaluators from different issues. One issue is confidence on the part of management that the effort to gather the information is worth the result of the survey. The confidence of the management depends on how the proposed model benefits a PO, either internally or externally.

As mentioned earlier, PO's basic acceptance of the value of the proposed model is in place from the beginning. Nonetheless, during a few of the initial surveys, the required information could not be easily obtained due to lack of familiarity with the in-depth nature of the rating system and with its practical value as a management tool. In most cases, once this obstacle is overcome by experience, the information gathering process is greatly strengthened.

Another issue is timing. Once an institution demonstrates the ability and willingness to provide the required information for the analysis, the issue becomes effective when the team can receive it. Ideally, a PO would provide the team with financial performance data in advance of the on-site survey. This has occurred in a very few cases, mainly because of lack of time on the part of busy microfinance managers and, the lack of a mechanism (and associated training) to easily gather the information off-site.

### **3.11.2 Trust**

A second condition related to trust and confidence on the part of PO management is that the information provided will remain confidential unless the institution decides otherwise. Additionally, senior management is given the opportunity to respond in writing to the final written report. These comments are attached to the final report submitted to the Board. The objective of the study should be translated to the management of the PO.

### **3.11.3 Availability of Staff for Interviews**

A third condition is the availability of staff for interviews by the researcher. Such willingness is initiated and directed by the Executive Director of the institution. It requires that the examination should be carefully scheduled conducted by the executive director taking into account the significant investment of time required by the entire staff. The study requires verification and cross-checking of information that involves visits to the Microfinance Institutions (POs) branches, visits with clients, and interviews with local staff at various levels of the institution. This is no doubt a diligent process which requires significant efforts and investment of time on the part of the local staff to coordinate field visits, obtain credit files, and interview themselves.

### **3.11.4 Required Level of Skill**

The skills required for the study team span a range of discipline including financial analysis, microcredit methodology, internal control and internal audit, organizational development and human resources, and management information systems. Each member of the study team must also have expertise in broader area of microfinance.

### **3.11.5 Level of Effort**

The level of effort required to complete a survey depends upon several variables including the level of complexity of the institution, whether a study has previously been completed, and the extent to which the requisite financial performance information is readily available and provided on a timely basis.

### **3.11.6 Composition and Precautions for Conducting the Study**

The study initially thought that the study survey team should include individuals outside PKSF. Due to the closeness of the technical assistance relationship between PKSF and its affiliates, it is felt that the PKSF employees involved in the study would be sufficiently objective to dissect the inner workings of the institution. The participation of these outside professionals is unsuccessful, however, because they lacked several important characteristics including in-depth knowledge of microfinance and a professional commitment to the task, which is deemed a low priority in the broader portfolio of activities of the accounting/consulting firm. Another problem is the lack of permanence of these professionals in the effort because they are rotated through different client's project rather than staying with the PKSF program. The level of experience of the survey

team is an important contributor to the conclusions of the study. Although the study clearly defines areas of analysis, procedures, required information, and rating criteria (ensuring standardized application), team members draw on their own experience in assessing microfinance institutions (POs) as they integrate the qualitative and quantitative indicators. The ability to take the information and impressions gathered during a study, organize and analyze this information, and adequately contextualize the results requires experience with a range of POs.

### **3.11.7 The Process of Collection of the Data**

There are two dimensions in determining the division of labor to complete the two aspects of the model each of which has involvement of the CO/DO and the audit officers of PKSf. The institution receives a list of required information that falls into several areas including economic, financial, portfolio quality, accounting, human resource management, strategic planning and budgeting, and procedures and manuals. Ideally, the institution would gather and send the quantitative information to the study team in advance, and would gather the information required to assess qualitative indicators (such as the personnel manual) before the team's arrival on-site. Only when this information is available can the study team focus on the verification and analysis of the quantitative data and on the measurement of the qualitative indicators through interviews and observations.

### **3.12 Sample Design**

Random sampling method is used. Using this method a total of 112 (**Appendix III**) PKSf Partner Organizations is randomly selected. Geographic location, size and age of the POs are taken into consideration so that the analysis may cover the highest possible diversity of the MFIs. To get a clear picture of the POs, which are the larger segments of the POs, sample organizations are selected from OOSA (refers to organization that works in small area) category POs. Among them Pos are selected random basis to cover a larger representation of the organizations.

### **3.13 Data Collection**

For collecting data we use the memory recall method. This is not a household survey; rather it is purely a survey of the MFIs. Samples are picked up by random sampling technique. In this study data is collected from both primary and secondary sources. In selecting the PKSf enlisted POs random sampling method is used.

As the proposed study aspires to incorporate both qualitative and quantitative techniques in its holistic approach for the financial and social performance evaluation of the MFIs, the methodology is explained in four stages where there is a research base judgment for the quantitative performance, the qualitative performance is applied.

### 3.14 Data Processing

The proposed model is aimed to offer additional three components for the rating of a PO:

- The relevance of each indicator within the context of micro finance,
- The ranges or descriptive information that allow the study to give the institution a rating on a scale of zero to five (with five as the measure of excellence), and
- The weightings for each indicator.

The process of the proposed model includes Spreadsheets, which contain two types of information:

- a) The institutions balance sheet and income statement, which have been inputted into the spreadsheets and adjusted to make the financial information comparable across institutions; and
- b) Programmatic statistics related to the Microfinance Institution (PO).

The adjusted balance sheets and income statements of the Spreadsheets are used to generate the key quantitative indicators (**Appendix IV**). This adjusted data is also used, along with the programmatic statistics, to generate what are considered to be supporting indicators.

These quantitative supporting indicators are not used in the evaluation of the PO, but they are supposed to allow better understanding of the factors impacting upon a given indicator, either quantitative or qualitative. The information, to measure the qualitative indicators, is gathered through interviews of the concerned CO/DO/AOs of PKSf and analyses of the institutions' policies and procedures. Qualitative indicators analyze those aspects of the institution which are non-quantifiable having direct impact on the financial situation and performance of the institution. The qualitative indicators are highly specific and applied consistently to each institution.

### 3.15 Data Adjustments

For financial adjustments, financial data is adjusted to ensure comparable results. There are three major adjustments that are applied to produce a common treatment for the effect of: a) inflation, b) subsidies, and c) loan loss provisioning and write-off. The goal is to provide a common analytical framework to compare real financial performance. The two main areas of potential distortion are unreported subsidies and misrepresented loan



portfolio quality.

For subsidy adjustment participating organizations' financial statements are adjusted for the effect of subsidies by representing the PO as it would look on an unsubsidized basis. Most of the participating POs indicate a desire to grow beyond the limitations imposed by subsidized funding. The subsidy adjustment permits a PO to judge whether it is on track towards such an outcome. A focus on sustainable expansion suggests that subsidies should be used to enhance financial returns. The subsidy adjustment simply indicates the extent to which the subsidy is being passed on to clients through lower interest rates or whether it is building the PO's capital base for further expansion. Adjustment is made for three types of subsidies: (1) a cost-of-funds subsidy from loans at below-market rates, (2) current-year cash donations to fund portfolio and cover expenses, and (3) in-kind subsidies, such as rent-free office space or the services of personnel who are not paid by the PO and thus are not reflected on its income statement.

Standardized policies (**Appendix V**) are applied for loan loss provisioning and write-off. POs vary tremendously in accounting for loan delinquency. Some count the entire loan balance as overdue the day a payment is missed. Others do not consider a loan delinquent until its full term has expired. Some POs write off bad debt within one year of the initial delinquency, while others never write off bad loans.

### **3.16 Preparation of the Questionnaire for Level II Data**

There are two dimensions in preparing questionnaire to complete the tasks of the study: the evaluator effort and the institutional effort. The task involves the process of determining the question of the research, as a part of the study. Keeping the aspect in mind, the institution is provided a list of required information as well as the questionnaire that falls into several areas including economic, financial, portfolio quality, accounting, human resource management, strategic planning and budgeting, and procedures and manuals. Ideally, the institution would gather and send the quantitative information to the study evaluator in advance, and would fill up the questionnaire required to assess qualitative and CSR aspects (such as the execution of service manual and the initiative taken by the PO in the last 'Sidor' or 'Ayla') before the evaluator's arrival on-site. Only when this information is available can the study evaluator focus on the verification and analysis of the quantitative data and on the measurement of the qualitative indicators through interviews and observations.

### 3.17 Value of the Study

This study can be useful for the following purposes:

- a) This research will give the microfinance sector the long cherished desire for having a set of standards for evaluating the POs
- b) It will help the POs to know their points of strengths and weaknesses.
- c) As the POs will be able to brush aside their limitations, if any, they will be able to smoothing their flow of funds from the financial sources.
- d) After being graduated the informal financial sector including microfinance will get easy access to the formal financial sector, such as commercial banks.
- e) It will ensure financial and institutional viability of the POs and other informal financial concerns that include operational and financial soundness, economic solvency, quality of portfolio, etc.
- f) It will ease the monitoring and evaluation activities of the POs that will include their financial and operational performance, periodic study on impact of micro credit, etc.
- g) It will help the POs to develop their financial management and internal control by implementing appropriate MIS, accounting system, internal audit, internal supervision, budgetary practices, etc.
- h) It will create and maintain expected institutional culture that includes sound governance, incentive base for management staff and employees, etc.
- i) It will help to develop the status of physical assets that includes ownership of real assets like building, land, furniture, vehicles, etc.

Overall, it will help to get a clear picture about skill and strength, transparency and accountability of the concerned those come under the purview of informal financial sector.

## CHAPTER FOUR

### MODEL DEVELOPMENT-QUANTITATIVE ASPECTS

This literature review for modeling of MFIs shows that it has two major components which address the typical issues faced by researchers in modeling business failures: identifying the important variables and the choice of modeling technique.

#### 4.1 Explore and Identify Potential Areas and Variables

The realization that different variables can be used conjointly to measure the financial health of the firm leads to many different financial distress modeling, as shown in Table 4.1. The table shows some of the most frequent methods appeared in the literature on this subject but it is by no means an exhaustive list.

This literature only covers both parametric and non-parametric techniques that have been found useful and have been applied to financial distress modeling and helpful for MFI modeling. It excludes analysis such as clustering (Schmidt 1984; Stein and Ziegler 1984) which was found to be a poor technique in identifying financially distressed firms. Other techniques such as Bayesian dimensional scaling (Oh and Raftery 2001) are also excluded, since while they can be useful, they have not been used specifically in the financial distress modeling context.

In Beaver (1966), the ratios found to have the highest discrimination powers are Cash flow/Total Debts, Net Income/Total Assets and Total Debts/Total Assets. Although these ratios were found to give good predictions, academics (Edmister 1972) have criticized this approach as it can be difficult to determine the financial health of the firm when different ratios give contradicting results, especially a single ratio cannot contain full information on the financial status of the firm.

For effective financial management it requires periodic analysis of financial performance. In general, organisations analyzed in the three areas of solvency, profitability, Liquidity (Weygandt, Keiso and Kimmel, 2010). Performance indicators used for the MFIs are dependent on the purpose of the organisation and dimension of MC. Mixmarket data identified 28 variables as well as areas for analyzing an MFI. PKSf uses 8 ratios to analyze its POs. These areas and variables are not mutually exclusive rather sometimes there are some ratios which are used for the same areas.

Table 4.1 A Compendium of Financial Models

	Works done	Remarks
parametric	<b>Balanced Scorecard</b> Drs. Robert S Kaplan (Harvard Business School) and David Norton (1992) as a performance measurement framework that added strategic non-financial performance measures.	More Objective
	<b>An Early Warning (Econometric) Model</b> Cole, Rebel A, and Jeffery W. Gunther (1998)	More Objective
	<b>DEA model</b> Berger and Humphrey (1997) Athanassopoulos (1997), Bala and Cook (2003), Brockett <i>et al.</i> (2004), Dekker and Post (2001), Hartman <i>et al.</i> (2001), Kuosmanen and Post (2001), Luo (2003), Pille and Paradi (2002), Paradi and Schaffnit (2003), Pastor <i>et al.</i> (1997), Saha and Ravisankar (2000), Seiford and Zhu (1999), and Worthington (2004).	More Objective
	<b>Probit Analysis</b> (Grablowsky & Talley 1981; Izan 1984)	More Objective
	<b>Logit Analysis</b> (Martin 1977; Schmidt 1984; Srinivasan & Kim 1987; Tam and Kiang 1992; Tirapat and Nittayagasetwat 1999; Charitou, Neophytou and Charalambous 2004; Jones and Hensher 2004; Lussier 2005)	More Objective
	<b>Discriminant Analysis</b> (Takahashi & Kurokawa 1948; Altman, Haldeman & Narayana 1977; Altman 1984; Izan 1984; Micha 1984; Stein & Ziegler 1984; Taffler 1984; Frydman, Altman & Kao 1985; Leeuwen 1985; Srinivasan & Kim 1987; Wood & Piesse 1988; Laitinen 1991; Luoma & Laitinen 1991; Laitinen 1992; Tam & Kiang 1992; Altman 2000; Ganesalinggam & Kumar 2001; Altman 2002)	More Objective
	<b>Survival Analysis</b> (Lane, Looney & Wansley 1986; Luoma & Laitinen 1991)	More Objective
	<b>Time Series</b> (Kahya & Theodossiou 1999)	More Objective
	<b>Multi-Dimensional Scaling</b> (Molinero & Ezzamel 1991; Neophytou & Molinero 2004)	More Objective
	<b>Principle Component Analysis</b> (Takahashi & Kurokawa 1948; Ganesalinggam & Kumar 2001)	More Objective
	<b>Linear Programming Classification</b> (Freed & Glover 1981; Freed & Glover 1981; Bajgier and Hill 1982; Srinivasan & Kim 1987; Gupta, Rao & Baghi 1990; Kochler & Erenguc 1990; Rubin 1990; Lam & Moy 2003)	More Objective
	<b>Multi-criteria Decision Aid Methods</b>	Less Objective
	<b>Utility based approaches, e.g. Preference Disaggregation</b>	Less Objective
	<b>UTADIS</b> (Zopounidis & Doumpos 1999), <b>MHDIS</b> (Doumpos & Zopounidis 1999)	Less Objective
	<b>The Jack-knife Technique.</b> Marais, Patell and Wolfson (1984); Tam and Kiang (1992); Feldman and Kingdon (1995).	Less Objective
	<b>Rough set theory</b> (Slowinski & Zopounidis 1995; Salcedo-Sanz, Fernández Villacañas, Segovia-Vargas & Bousoño-Calzón 2005)	Less Objective
	<b>Outranking Relations, e.g. ELECTRE</b> (Dimitras, Zopounidis & Hurson 1995)	Less Objective
Non-parametric	<b>User driven Expert Systems</b> (Duchessi & Belardo 1987; Srinivasan & Kim 1987; Duchessi, Shawky & Seagle 1988; Elmer & Borowski 1988; Srinivasan & Ruparel 1990)	Less Objective
	<b>Classification trees and data driven expert systems</b> (Frydman, Altman & Kao 1985; Srinivasan & Kim 1987; Messier & Hansen 1988; Shaw & Gentry 1988; Salcedo-Sanz, Fernández-Villacañas, Segovia- Vargas & Bousoño-Calzón 2005)	More Objective
	<b>Neural Networks</b> (Tam & Kiang 1992; Patuwo, Hu & Hung 1993; Altman, Marco & Varetto 1994; Lee, Han & Kwon 1996; Serrango-Cinca 1996; Charalambous, Charitou & Kaourou 2000; Shah & Murtaza 2000; Charitou, Neophytou & Charalambous 2004)	More Objective

MRA rated (MRA, 2008) top 20 MFIs based on 5 indicators where Microfinance Institutions (InM and CDF, 2007) selected top 50 MFIs based on six indicators.

However, there are six areas (Scale, outreach and growth (Size), portfolio quality, productivity and efficiency, leverage and capital adequacy selected to analyze the MFIs (Ledgerwood, 1998). The ratios under these six areas are given importance though the other ratios are also discussed.

In response to the need for globally accepted and standardized analytical tools, many national and international initiatives have been under taken. A snapshot of these initiatives is given in Table 4.2 where as the extended form is given in appendix VI.

<b>Name</b>	<b>Description</b>	<b>Methodology</b>
<b>PKSF</b>	composite rating system which is developed based on the requirement of PKSF for funding its partner Organizations giving emphasis on financial as well as program information. It has the limitations of a universal approach.	In order to be capable of getting financed from PKSF remaining in the present category, a PO should score in the 'First and Second levels' of indicators. In the first level financial and program performance and in the second level HRD, M&E, budgeting and auditing practice performance are measured
<b>Accion International</b>	Non-for-profit network of MFIs based in USA. It has assessed 56 MFIs in Latin America, Africa, CEE (Central and Eastern Europe)/NIS (Newly Independent States) and South Asia.	It has adapted the CAMEL rating methodology to perform global risk assessments of MFIs. The CAMEL methodology assesses 21 indicators under 5 areas: Capital adequacy, Asset quality, Management, Earnings and Liquidity management.
<b>Mixmarket</b>	A network for micro credit information exchange within Asia assisted by the ADB to promote MC.	Nine variables selected for ranking MFIs and based on nine variables nine individual lists are developed based on borrowers outreach, depositors outreach, scale, market penetration growth, profitability efficiency productivity and portfolio quality.
<b>CGAP</b> (Waterfield and Ramsing 1998)	This system measure a list of indicators based on the need of the manager of the MFIs. These indicators again grouped into six major type.	The first group is portfolio quality indicators that measure the portfolio at risk, loan loss reserve ratio, loan write-off ratio, and loan rescheduling ratio. The second group is profitability indicators. The third group is financial solvency indicators, the fourth group is growth indicators, the fifth group is productivity indicators and the last group is outreach indicators.
<b>World Council's of Credit Union</b>	PEARLS provides credit union managers with concise, easy-to-read reports that reveal institutional weaknesses and trends. It also offers a strategic business planning tool to help managers implement change.	Each letter in the word PEARLS measures the key areas of credit union operations: Protection, Effective financial structure, Asset quality, Rates of return and costs, and Liquidity and Signs of growth.
<b>Planet Rating</b>	French non-for-profit organization. It has developed the GIRAFE methodology. So far it has analysed 78 MFIs of Africa, Latin America, East Asia, CEE /NIS and MENA (Middle East and North Africa).	GIRAFE means Governance and decision making process, Information and management tools, Risk analysis and control, Assets including loan portfolio, Funding (equity and liabilities) and Efficiency and profitability. It evaluates three kinds of sustainability: financial, organizational and operational.
<b>M-CRIL</b>	Indian specialized microfinance rating agency. It has conducted 185 assessments of MFIs from South Asia, East Asia and the Pacific and CEE/NIS.	It uses a rating tool with three categories of indicators: governance and strategy, management systems, and financial performance.
<b>Microrate</b>	Specialized microfinance rating agency based in the USA. It has conducted 172 MFIs assessments in Latin America and Africa.	For this agency, there is no unique criterion applying equally to all MFIs. It tries to identify this hierarchy correctly for each analysis. But the criteria ranked most frequently are: portfolio quality, operational effectiveness, management and governance.
<b>CRISIL</b>	Rating agency with specialized microfinance practice. So far, it has conducted 18 assessments of MFIs from Southeast Asia.	It has developed the MICROS methodology, with six indicators: Management 25%, Institutional Arrangement 15%, Capital Adequacy and Asset Quality 20%, Resources 10%, Operational Effectiveness 15%, and Scalability and Sustainability 15%.
<b>Apoyo &amp; Asociados</b>	Formal rating agency affiliated to Fitch Ratings. It has conducted 86 assessments to Latin American MFIs.	It issues a report containing information about: equity, performance, credit risk, funds diversification, market situation, operational and technological risks, management and ownership, and future trends.
<b>Class rating</b>	Formal specialized rating agency that has undertaken so far more than 20 assessments to Latin American MFIs.	The assessment of bonds, debt, shares and financial strength (global risk assessment) of financial institutions takes 5 steps: information analysis, solvency analysis, liquidity analysis, issue's contract analysis and final classification.

<b>Equilibrium</b>	Formal rating agency that conducts credit rating assessments to Latin American MFIs. So far it has conducted 13 MFI assessments.	It performs a quantitative analysis, focused on asset quality, capital adequacy, profitability, liquidity, balance sheet mix, funding strengths and weaknesses, cash flows, and so on. On the other hand, qualitatively, it assesses the management quality, business diversification and financial flexibility.
<b>Feller rate</b>	Formal rating agency, Standard and Poor's strategic alliance partner, that so far has conducted 8 assessments to Latin American MFIs.	The rating is based both in solvency classification and product's own characteristics. For debt titles assessments, Feller examines guarantees, which can lead to different repayment capacities.
<b>Fitch Rating</b>	International formal rating agency that conducted credit ratings and global risk assessments. So far, its Chilean branch has assessments to 20 Latin American MFIs.	The rating is a comprehensive qualitative and quantitative assessment of strengths and weaknesses of the institution. Quantitative aspects e.g. balance sheet integrity, or profitability and risk management are counterbalanced by qualitative considerations about strategy, management quality, environment issues and future perspectives.
<b>JCR-VIS</b>	Pakistan formal rating agency. It mainly performs credit ratings and has conducted 5 assessments of South Asian MFIs.	It uses a methodology called MIRACLES, the acronym for Management, Information Systems, Reputation, Asset quality, Capital, Liquidity, Earnings and Supervisory systems (internal and external).
<b>Micro finanza</b>	Italian specialized microfinance rating agency. It has completed 20 assessments to MFIs in Africa, CEE/NIS, Latin America, and South Asia.	It performs a quantitative and qualitative assessment of strengths and weaknesses of the MFI, to grade the risk on two categories: fiduciary risk (related to governance and management) and credit risk (obligations repayment ability).
<b>Pacific Credit Rating</b>	Formal rating agency that mainly conducts credit ratings. It has undertaken 7 assessments to Latin American MFIs.	Formal rating agency that mainly conducts credit ratings. It has undertaken seven assessments to Latin American MFIs.
<b>The Philippine Coalition for Microfinance Standards</b>	Considers Outreach; Repayment Rate; Portfolio at Risk; Operating Cost Ratio; Operational Self-Sufficiency; Financial Self-Sufficiency; Equity to Asset Ratio; and Current Ratio.	For Outreach: Number of Active Clients. For Collection, Efficiency and Portfolio Quality: Repayment Rate. Portfolio at Risk for Sustainability, Operating Cost Ratio, Operational Self-Sufficiency and Financial Self-Sufficiency for Capital Adequacy and Leverage: Equity to Asset Ratio and for Liquidity: Current Ratio are measured
<b>SEEP</b>	Seep analyzes the financial condition of an MFI. The framework is divided into three groups, each of which comprises of a set of ratios like financial sustainability, financial efficiency and portfolio quality.	The first group contains for the return on performing assets, financial cost ratio, loan loss provision ratio, and operating cost ratio, adjusted cost of capital, donations and grants ratio, operating self sufficiency ratio, and financial self sufficiency ratio where the second group contains the cost per unit of money lent, cost per loan made, number of active borrowers per credit officer, portfolio per credit officer and the third group contains the portfolio in arrears, portfolio at risk, loan loss ratio, reserve ratio.

(Source: website of the concern organization)

#### 4.1.1 Ownership and Governance

Although effective external regulation and supervision by regulatory bodies are important to the health of the financial system, no amount of external oversight can replace accountability that stems from proper governance and supervision performed by the owners of financial institutions. The following points highlight issues of ownership and governance relative to adequate supervision of MFIs: adequate oversight of management; organizational and ownership structures; sufficient financial depth.

#### Management Risks

The management risks that apply to MFIs are generated by the specific methods of providing financial service: decentralized operational systems; management efficiency; management information.

#### New Industry

A number of the risks that stem from the fact that microfinance is a relatively new field. Formal financial service may also be new to the dimension of new products, micro market and services.

## **Risk Factors of MFIs**

While both MFIs and commercial banks are vulnerable to liquidity problems brought on by a mismatch of maturities, term structure, and currencies, the risk features of MFIs differ significantly from those of commercial banks. This is due primarily to the MFIs' client base (low-income, asset less clients requiring small loans), lending models (small, unsecured loans for short terms based on character or group guarantees), and ownership structure (capitalized by donors rather than commercial investors/owners). Regulations designed for commercial banks are usually not suitable for MFIs because of MFIs' different risk profile. An appropriate approach to regulating MFIs must be based on an understanding of the different risks and of the country's legal and institutional framework.

### **4.1.2 Consideration When Regulating MFIs**

It is important for regulators to establish minimum standard for MFIs while remaining flexible and innovative. At a minimum, when regulating and supervising MFIs, five issues need to be considered (CGAP, 1996): Minimum capital requirements; Capital adequacy; Liquidity requirements; Asset quality; and Portfolio diversification. Ledgerwood (1998) explored performance indicators in six areas: Scale outreach and growth; Portfolio Quality; Productivity and Efficiency; Financial Viability; Profitability; and Leverage and capital adequacy.

### **4.1.3 Scale, Outreach and Growth (Size)**

Study finds that MFIs need to analyze the scale, their activities and the depth of outreach. Performance assessment frameworks introduced by Yaron (1992) consist of two primary criteria: The level of outreach achieved among target clientele and self system of the MFIs. Different indicators are used to measure scale, outreach and growth such as: Total Asset, Gross loan Portfolio and Total Asset Growth.

Outreach indicators are taken as proxies for development impacts of microcredit programmers, assuming that self-sustainable financial institutions are likely to contribute to income expansion and poverty reduction - that is, the output of efficient rural financial intermediation leads to the desired development impact (Yaron, McDonald, and Piperk 1997). The twin criteria of outreach and self-sustainability become the yardstick of microcredit program evaluation (Yaron 1992a, 1992b; Christen, Rhyne and Vogel 1994; Chaves and Gonzalez-Vega 1996; Mahajan and Ramola 1996).

Empirical literature recognizes the relevance of company size as an explanatory variable of rating. Pioneer studies such as Horrigan (1966), Pogue and Soldofsky (1969), or Ederington (1985) included variables measuring size like assets, number of employees, or turnover. Larger MFIs are supposed to have better capability to meet their commitments. So the question whether there is a positive and significant relationship between MFI size and rating assigned is answered by the above discussion. Recent studies conducted by mixmarket (2009) also identified sustainability, Target market other than these areas for analyzing an MFI.

#### **4.1.4 Portfolio Quality**

To find the quality status of the portfolio different portfolio related indicators are to explore which again can be expanded in repayments rates which contains OTR, ODR. Portfolio quality ratios contain arrear rate, Portfolio at risk (PAR), delinquent borrower's rate. Loan loss ratios contain loan loss reserve ratio, loan loss ratio etc.

Most of the studies such as Mixmarket (2009), Pogue and Soldofsky (1969), Pinches and Mingo (1973), or Poon et al (1999) found a significant relationship between profitability variables and rating. Companies with better returns will have larger capacity to meet their financial obligations, and therefore, get a good rating. Recent studies conducted by Mixmarket and PKSf also identified these variables (such as Portfolio at risk (PAR), Loan loss reserve ratio etc.) and areas (such as asset quality etc) for the analysis of portfolio quality.

#### **4.1.5 Productivity and Efficiency**

Productivity refers to the level of scale that is generated for a given resource. Productivity and efficiency provide information about the rate at which MFIs generate revenue to cover expenses and contribute to attain self sufficiency. By analyzing these ratios MFIs determine whether they are maximizing their resources or not. To analyze productivity several ratios are analyzed which include active borrowers per credit officer, portfolio per credit officer, Member per credit officer.

Efficiency ratios measure the cost of providing services to generate revenues. This analyzes the operating cost ratio, cost per unit of currency lent, cost per loan made.

MFIs are financial institutions. Efficiency is a crucial aspect of every financial institution, which implies the rational use of inputs and outputs. Efficiency is a way to survival. Banking industry has developed its own indicators relating to different internal measures



such as operating expenses, margins, revenues, etc., to obtain productivity and efficiency indicators. Those indicators can have a ratio form or can be based on the microeconomic theory of production functions. For more details about efficiency and rating in the banking sector and get the answer see Bremer and Pettway (2002).

Financial viability refers to the ability of an MFI to cover its cost from the revenue it earns. Other than the financial spread, two levels of self-sufficiency ratios are examined to measure the financial viability of an MFI. The ratios are spread which is expressed by the  $(\text{revenue from interest and fee} - \text{financing cost})/\text{average portfolio outstanding}$  and the operational and financial self sufficiency ratio.

To think about rating means to think about risk. Risk is a key issue in the rating process because the rating expresses the likelihood of a company to meet its repayment commitments. Poon, Firth & Fung (1999) find a significant relationship between risk variables and rating assigned to financial institutions. So there is a need to find the answer whether there is a negative and significant relationship between MFI risk and rating assigned.

Profitability ratios measure an MFI's net income in relation to the overall activities and determine whether the MFI earning adequate return on the funds it has invested in the MFI. It analyzes ROA, ROB (Return on Business), ROE.

Risk measures the protection coverage which ensures the quality of the portfolio. Risk is measured by portfolio at risk, write-off ratio and risk coverage ratio. For efficiency and productivity areas in addition to the above areas and ratios the mixmarket uses several ratios like admin expense/assets, avg loan bal/borrower, avg loan bal per borrower/GNI per capita, borrowers per loan officer, cost per borrower, cost per loan, ratios.

#### **4.1.6 Leverage and Capital Adequacy**

Leverage refers to the extent to which an MFI can borrow money in terms of its equity. And capital adequacy refers to the amount of capital an MFI has in terms of its assets. Again, capital adequacy relates to leverage in terms of the adequacy of the MFI's funding structure. In analyzing leverage and capital adequacy debt equity ratio, reserve ratios, saving ratios, capital to total assets ratio (KTA with fixed assets) are used.

Areas that are stated in subsection 4.1.1 through 4.1.6 are the areas by which an MFI can be measured based on the individual need. These are also useful for the donors as well as investors. In case of analysing performance indicators it is found that there are contextual

factors (such as geographical location in Latin America and Asia may be different) that are considered.

Though the evolution for a specialized MFI's rating is a new concept, microfinance rating began as separate initiatives by few specialist companies whose have no uniformity in methodology. But, a convergence in the criteria and definitions used has resulted from a series of formal and informal consultations amongst these raters. The key parameters assessed relate to the quality of governance, nature of products and delivery systems, suitability of information and accounting systems, efficacy of the control environment, quality of portfolio, financial performance, fund management, including asset-liability matching and strategies for expansion and competition.

As mentioned earlier CGAP (2003) follows four categories: Sustainability/profitability, Asset/liability management, Portfolio quality, and Efficiency/productivity when MicroRate focuses on five core areas of MFI's financial and operational performance: Management and Governance, Management Information Systems, Financial Conditions, Credit Operations, and Portfolio Analysis.

Different studies (Pinches and Mingo, 1973); (Mangiameli and West, 1999); (Mar Molinero et al, 1996); (Poon, Firth & Fung, 1999) and (Cinca, 2006) on rating research show that all the variables are closely related to the five CAMEL areas. But the limitations of that study are the variables that are selected for the areas are selected by choices. There may be variables for social performance which may have positive relation with assigned rating.

In exploring the literature for determining the variables in line with the microcredit the study found that Ledgerwood (1998), Mixmarket (2009) focus on six major sensitive areas (Outreach, Sustainability, Efficiency and productivity, Portfolio quality and Risk, Leverage and capital adequacy and Social performance) of MC instead of traditional three areas (Solvency, Profitability and Liquidity of an organisation). The study found that out of these six gross areas five are related and statistically significant in rating MFIs.

Many MFIs obtain funds from the market (loans) or receive grants. Other issues become relevant in the selection of inputs and outputs. For example, some MFI receive subsidized loans at an interest rate that is below the market. It follows that the selection of inputs and outputs is crucial in the financial institution modeling. Berger and

Humphrey (1997) suggest that one could assess efficiency under a variety of output/input specifications, and see the way in which calculated efficiencies change as the specification changes. This is sensible, but they do not provide guidelines on how to choose between specifications. In fact, specification searches are common in the modeling of financial institutions; examples are Oral and Yolalan (1990), Vassiloglou and Giokas (1990), and Pastor and Lovell (1997).

A major problem with the selection of inputs and outputs in a DEA (Data Envelopment Analysis) model is that there is no statistical framework on which significance tests can be based. The neat approach of variable selection that is used in regression, based on t statistic values, has no parallel in DEA. One may be tempted to use as many inputs and outputs as one may think to be relevant, but some of them will be correlated, perhaps highly so. Parkin and Hollingsworth (1997) review the problems that variable selection creates in DEA.

Jenkins and Anderson (2003) warn against the use of correlated inputs and outputs in a DEA model. An important issue is that the number of 100% efficient units increases with the number of inputs and outputs in the model, and adding irrelevant variables may change the results obtained; Dyson *et al.* (2001), Pedraja Chaparro *et al.* (1999). Specification search methods in DEA have been proposed by Norman and Stocker (1991), Pastor *et al.* (2002), and Cinca and Molinero (2004). The model specification methodology suggested by Cinca and Molinero (2004) is used later on. This, in essence, consists in calculating efficiencies for every possible combination of inputs and outputs. A two way table is obtained in which the columns are output/input specifications and the rows are decision units (MFIs).

Over the past decade, there has been an industry wide effort by SEEP Network to identify and implement financial reporting standards for microfinance institutions. The objective is to provide uniform financial information for all MFIs, regardless of size, maturity or geographic location to managers and stakeholders including investors, donors, raters, MIS software developers, and associations. This promotes transparency, facilitates comparability, improves decision-making, and increases investment by making it easier to observe and understand an MFI's financial health.

After an extensive industry collaboration, the SEEP<sup>1</sup> Network released a milestone document in 2005: *Measuring Performance of Microfinance Institutions, a Framework for Reporting, Analysis, and Monitoring (the Framework)*. The Framework includes foundational information for uniform financial statements and 18 ratios designed to measure MFI performance in four areas: (1) sustainability/profitability; (2) asset and liability management; (3) portfolio quality; and (4) efficiency/productivity. Such information is used by Mixmarket, the frame tool, investors/donors, MIS software vendors, raters, regulators, auditors, etc. The original Framework was tailored to credit-only institutions.

CRISIL has adapted its existing CRAMEL methodology for evaluating MFI/NGO institutions. The revised appraisal format termed as MICROS, is structured along the following lines: Management, Institutional Arrangement, Capital Adequacy & Asset Quality, Resources, Operational Effectiveness, Scalability and Sustainability. Each of MICROS factors is described as:

Management looks for history & track record, alliances & networks, organizational structure related issues, Management Information Systems - efficacy of loan monitoring systems; overdue monitoring systems; cash flow projections system, use of it in operations, human resource management, processes, controls & audit, head office level controls; group, centre, branch office level control systems; efficacy of internal audit, social impact on environment-availability of impact assessment studies; credibility of the impact assessment study.

Institutional arrangement looks for diversity of the technical expertise on the board - such as finance, law, marketing; professional reputation of the board members; adoption of the corporate governance practices - if any, independence of the board from the management; ownership & control of promoters, goals & strategies, depth of management, experience and track record of second rung and field level officers, grooming & succession plans.

Capital Adequacy and Asset Quality measures capital adequacy, ability to raise equity, asset quality - portfolio at risk; write-offs; portfolio classification system.

Resources looks for ability to raise resources, current funding profile, adequacy of the

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<sup>1</sup> Small Enterprise Education and Promotion (SEEP) analyzes the financial condition of an MFI. The framework is divided into three groups, each of which comprises of a set o ratios naming financial sustainability, financial efficiency and portfolio quality.

same, cost of funds -weighted average cost of funds and comparison to the average portfolio yield, liquidity and asset liability management.

Operational effectiveness measures office outreach and quality of infrastructure, efficiency (staff allocation, operational efficiency, and administrative efficiency), earnings and profitability (return on equity; return on assets, operational self sufficiency, and financial self sufficiency).

Scalability & sustainability measures future ability to access low cost funds, develop into a mainstream financial institution, sustain operations on a larger scale, attract & retain quality human resources, diversify lending methodologies and portfolio, maintain asset quality, develop in-house talent and second line management

#### 4.2 Screening of the Number of Areas and Variables by Avoiding Duplication

Considering the issues mentioned above , the following ratios are considered potential for MC measuring financial capacity as well as sensitivity and the aspects which do matter in rating MFIs: **DER** (Debt to Equity); **RR** (Reserve Rate); **PAR** (Portfolio At Risk); **DSCR** (Debt Service Cover Ratio); **DR** (Delinquency Rate); **LLPR** (Loan Loss Provision Rate); **CRR** (Cum.Repayment Rate); **OTR** (On Time Realization Rate) **ODR** (On Demand Realization); **OSS** (Operational Self-Sufficiency); **ROE** (Return on Equity); **IAPA** (Income to APA); **OCAPA** (Op. Cost to APA); **SR** (Savings Rate); **KTA** (Capital to TA); **CPTL** (Cost Per Tk. Lent); **ROA** (Return on Assets) **KTAW** (Cap to Total Asset without FA); **CR** (Current Ratio); **POCA** (Productivity of Other Current Asset); **LSR** (Liquidity to Savings); **FCAPA** (Financial Cost to Avg Perform. Asset); **LLAPA** (Loan Loss to Avg Performing Asset); **FSS** (Financial Self-Sufficiency)

Table 4.3: Screening of the Potential Variables

Term	Formula	Explanation
Yield on Gross Portfolio	$\frac{\text{Cash Received from Interest, Fees, and Commissions on Loan Portfolio}}{\text{Average Gross Loan Portfolio}}$	Indicates the MFI's ability to generate cash from interest, fees, and commissions on the Gross Loan Portfolio. No revenues that have been accrued but not paid in cash are included.
Portfolio to Assets	$\frac{\text{Gross Loan Portfolio}}{\text{Assets}}$	Measures the MFI's allocation of assets to its lending activity. Indicates management's ability to allocate resources to the MFI's primary and most profitable activity—making microloans.
Cost of Funds Ratio	$\frac{\text{Financial Expenses on Funding Liabilities}}{(\text{Avg. Deposits} + \text{Avg. Borrowing})}$	Calculates a blended interest rate for all the MFI's funding liabilities.

Debt to Equity	<u>Liabilities</u> Equity	Measures the overall leverage of an institution and how much cushion it has to absorb losses after all liabilities are paid.
Liquid Ratio	<u>Cash + Trade Investments</u> (Demand Deposits + Short-term Time Deposits + Short-term Borrowings + Interest Payable on Funding Liabilities + Accounts Payable and Other Short-term Liabilities)	Indicates level of cash and cash equivalents the MFI maintains to cover short-term liabilities. Short-term means assets or liabilities or any portion thereof that have a due date, maturity date, or may be readily converted to cash within 12 months.
<b>Portfolio Quality</b>		
Portfolio at Risk (PAR) Ratio	PAR > 30 Days + Value of <u>Renegotiated Loans</u> Gross Loan Portfolio	The most accepted measure of portfolio quality. The most common international measurements of PAR are > 30 days and > 90 days.
Write-off Ratio	<u>Value of Loans Written Off</u> Average Gross Loan Portfolio	Represents the percentage of the MFI's loans that has been removed from the balance of the gross loan portfolio because they are unlikely to be repaid.
Risk Coverage Ratio	<u>Impairment Loss Allowance</u> Portfolio at Risk > 30 Days	Shows how much of the portfolio at risk is covered by the MFI's Impairment Loss Allowance.
<b>Efficiency and Productivity</b>		
Operating Expense Ratio	<u>Operating Expense</u> Average Gross Loan Portfolio	Highlights personnel and administrative expenses relative to the loan portfolio the most commonly used efficiency indicator.
Cost per Active Client	<u>Operating Expense</u> Average Number of Active Clients	Provides a meaningful measure of efficiency for an MFI, allowing it to determine the average cost of maintaining an active client.
Borrowers per Loan Officer	<u>Number of Active Borrowers</u> Number of Loan Officers	Measures the average caseload of (average number of borrowers managed by) each loan officer.
Active Clients per Staff Member	<u>Number of Active Clients</u> Total Number of Personnel	The overall productivity of the MFI's personnel in terms of managing clients, including borrowers, voluntary savers, and other clients.
Client Turnover	Number of Active Clients, End of Period + Number of New Clients During Period – Number of Active Clients, Beginning of Period Average Number of Active Clients	Measures the net number of clients continuing to access services during the period; used as a measurement of client satisfaction.
Average Outstanding Loan Size	<u>Gross Loan Portfolio</u> Number of Loans Outstanding	Measures the average outstanding loan balance per borrower. This ratio is a profitability driver and a measure of how much of each loan is available to clients.
Average Loan Disbursed	<u>Value of Loans Disbursed</u> Number of Loans Disbursed	Measures the average value of each loan disbursed. This ratio is frequently used to project disbursements. This ratio or R17 can be compared to (N12) GNI per capita.

### 4.3 Sum up the Exploration and Selection of Potential Performance Indicators

Based on the above discussion initiatives have been taken to identify the areas and the financial performance indicators to measure the MFIs. Here the ratios identified and checked considering the dimensions of MC are **DER** (Debt to Equity); **PAR** (Portfolio At

Risk); **DSCR** (Debt Service Cover Ratio); **DR** (Delinquency Rate); **ODR** (On Demand Realization); **OSS** (Operational Self Sufficiency); **ROE** (Return on Equity); **IAPA** (Income to APA); **OCAPA** (Op. Cost to APA); **SR** (Savings Rate); **KTA** (Capital to TA); **CPTL** (Cost Per Tk. Lent); **ROA** (Return on Assets) **KTAW** (Cap to Total Asset without FA); and **CR** (Current Ratio); These ratios are analyzed through FA for selection of potential variables.

Table 4.4: Selection of the Potential Variables		
Term	Formula	Explanation
<b>Capital Adequacy</b>		
<b>DER</b> (Debt to Equity)	Debt/Equity	Measures the overall leverage of an institution and how much cushion it has to absorb losses after all liabilities are paid.
<b>RR</b> (Reserve Rate)	LLR/ALO	Measures the overall leverage of an institution and how much cushion it has to absorb losses after all liabilities are paid.
<b>Asset Quality</b>		
<b>PAR</b> (Portfolio At Risk)	Outstanding bal. of loans with payments past due/Portfolio outstanding (including amounts past due)	The most accepted measure of portfolio quality. The most common international measurements of PAR are > 30 days and > 90 days. This is the true measure of the delinquent loans..
<b>DSCR</b> (Debt Service Cover Ratio)	(Current Surplus+Int+Prin)/Total Int Paym+Total Prin payment)	DSCR indicates whether or not enough revenue has been earned to cover both interest and principal payment.
<b>DR</b> (Delinquency Rate)	AOD/ALO	It shows the how much of the loan has become due and not has been received.
<b>LLPR</b> (Loan Loss Prov. Rate)	LLP/ALO	Loan Loss Provision Rate determines the quality of the loan portfolio.
<b>CRR</b> (Cum.Repay Rate)	(Cum. Recov-Ad. Recov)/(Cum. Recov-Ad. Recov)+Overdue principal)*100	It does not measure the risk of the portfolio. Rather it measures historical rate of loan recovery.
<b>OTR</b> (On Time Realization Rate)	ARFP/AReFP	It does not measure the risk of the portfolio. Rather it measure the amount of payments received within the period with respect to the amount due.
<b>ODR</b> (On Demand Realization)	ARFP/AReUP	It measures the amount of payments received within the period with respect to the amount past due.
<b>OSS</b> (Operational Self Sufficiency)	$\frac{T_{In}}{OC}$	Measures how well an MFI can cover its costs through operating revenues. Measures how well an MFI can cover its costs taking into account adjustments to operating revenues and expenses.
<b>Management</b>		
<b>ROE</b> (Return on Equity)	$\frac{N_{In}}{\text{Total Equity}}$	Calculates the rate of return on the average equity for the period. Because the numerator does not include non-operating items or donations and is net of taxes, the ratio is frequently used as a proxy for commercial viability.
<b>IAPA</b> (Income to APA)	$\frac{TIN}{APA}$	IAPA denotes the percentage of the income in terms of the Average Performing Asset.

<b>OCAPA</b> (Op. Cost to APA)	OC/APA	OCAPA indicates the efficiency of the lending operations in terms of the Avg Performing Asset.
<b>SR</b> (Savings Rate)	SOS/ALO	SR denotes the percentage of the saving outstanding in terms of the loan outstanding.
<b>KTA</b> (Capital to TA)	Capital/TA	KTA denotes the percentage of capital in terms of the Total Assets. It indicates the adequacy of the capital.
<b>CPTL</b> (Cost Per Tk. Lent)	(OC+FC+LLPFTP)/TAD	Cost Per Tk. Lent made ratio highlights the impacts of the turnover of the loan portfolio on operating cost.
<b>Earnings</b>		
<b>ROA</b> (Return on Assets)	Nin/Total Asset	Measures how well the MFI uses its assets to generate returns. This ratio is net of taxes and excludes non-operating items and donations.
<b>KTAW</b> (Cap To Total Asset Without FA)	Capital/TA (WoFA)	KTAW denotes the percentage of capital in terms of the Total Assets where there is no FA. It indicates the liquidity situation of the MFI for managing capital.
<b>Liquidity</b>		
<b>CR</b> (Current Ratio)	$\frac{LOS-1+yr}{OD+Cash+Bank+STD} / (\text{PKSF fund refundable for the yr}+SOS+other\ loan)$	CR denotes the percentage of cash or cash equivalent in terms of liquidity required for the operation of the MC.
<b>POCA</b> (Productivity of Other Current Asset)	OIn/OCA	POCA denotes the efficiency of using other cash equivalent asset.
<b>LSR</b> (Liquidity to Savings)	(Cash+Bank+Govt. Secu)/SOS	LSR denotes the liquidity situation in terms of the saving amount.
<b>FCAPA</b> (Financial Cost to Avg Perform. Asset)	FC/APA	FCAPA measures the percentage of the financial cost of operating MC in terms of Avg Performing Asset.
<b>LLAPA</b> (Loan Loss to APA)	LLPFTP/APA	LLAPA shows what percentage of loan portfolio has been made in terms of APA.
<b>FSS</b> (Financial Self-Sufficiency)	$Tin / (OC+FC+LLPFTP+IC)$	FSS indicates whether or not enough revenue has been earned to cover both direct cost including financial cost, provision for loan losses, and operating cost and Indirect cost including imputed cost.

#### 4.4 Selection of Preliminary Variables and Major Areas by Conducting FA

Factor Analysis as we know is a process which is primarily used for data reduction and summarization. To explain formulation of the problem and identify the required factors, relationships among sets of many interrelated variables are examined and represented in terms of a few underlying factors.

Figure 4.1: FA Process	Steps
Formulate the Problem	Step-I
Construct the correlation matrix	Step-II
Determine the method of FA	Step-III
Rotate the factors	Step-IV
Interpret the factors and select the major areas and variables	Step-V



Mathematically, factor analysis is somewhat similar to multiple regression analysis, in that each variable is expressed as a linear combination of underlying factors. The amount of variance a variable shares with all other variables included in the analysis is referred to as communality. The co-variation among the variables is described in terms of a small number of common factors plus a unique factor for each variable.

It is possible to select weights or factor score coefficients so that the first factor explains the largest portion of the total variance. Then a second set of weights is selected, so that the second factor accounts for most of the residual variance, subject to being uncorrelated with the first factor. The same principle could be applied for selecting additional weights for the additional factors. Thus, the factors can be estimated so that their factor scores, unlike the values of the original variables, are not correlated. Furthermore, the first factor accounts for the highest variance in the data, the second factor the second highest, and so on. Special statistics are associated with factor analysis.

The steps involved in conducting factor analysis are illustrated in Figure 4.1. The first step is to define the factor analysis problems and identify the variables to be factor analyzed. Then a correlation matrix of these variables is constructed and a method of factor analysis is selected. The researcher decides on the number of factors to be extracted and the method of rotation. Next, the rotated factor should be interpreted. Depending upon the objectives, the factor scores may be calculated, or surrogate variable selected, to represent the factors in subsequent multivariate analysis. Finally, the fit of the analysis model is determined. We discuss these steps in more detail in the following sections.

#### **4.4.1 Formulate the Problem**

Problem formulation includes several tasks. First, the objective of factor analysis is identified here. The variable to be included in the factor analysis is specified based on past research, theory and judgment of the researcher which is explored earlier. It is important that the variables be appropriately measured on an interval or ratio scale. An appropriate sample size is used here as mentioned in methodology. As a rough guideline, there should be at least four or five times as many observations (sample size) as there are variables (Malhotra, 2007). In many marketing research situations, the sample size is small, this ratio is considerably lower. In these cases, the results should be interpreted cautiously.

To illustrate the analysis, the study shows the determination of the underlying influence

among the variables. The potential data (Appendix IX) obtained from the analysis are given in Table 4.5. A descriptive statistics has been given from the analysis. A sample of 18 variables is selected from the exploration research which is given below :

Table 4.5: Descriptive Statistics				
	Mean	Std. Deviation <sup>a</sup>	Analysis N <sup>a</sup>	Missing N
Current Ratio	1.8250	.84997	112	1
Cap to Total Asset without FA	.3068	1.24820	112	0
Debt Service Cover Ratio	2.3216	6.68429	112	0
Debt Equity Ratio	8.6573	8.51052	112	0
Return on Equity	.2330	.97118	112	1
Op. Self Service	2.0986	4.83591	112	0
On Demand Realization	.9013	.17549	112	0
Delinquency Rate	.0314	.05317	112	0
Loan Loss Provision Rate	.0332	.07959	112	0
Reserve Rate	.0205	.03715	112	0
Income to APA	.0879	.09547	112	0
Op. Cost to APA	.0529	.05290	112	0
Savings Rate	.0529	.05290	112	0
Return on Equity	.0136	.01465	112	0
Productivity of Other Current Asset	.0084	.01199	112	0
Capital to TA	.0852	.10999	112	0
Cost Per Tk. Lent	.0274	.25423	112	0
Portfolio at Risk	.4403	3.77902	112	0

a. For each variable, missing values are replaced with the variable mean.

#### 4.4.2 Determine the Method of Factor Analysis

Principal Components Analysis is recommended when the primary concern is to determine the minimum no of factors that will account for maximum variance in the data for use in subsequent multivariate analysis.

#### 4.4.3 Determine the Number of Factors

It is possible to as many as principal components as there are variables and in doing so only factors with Eigen value greater than 1.0 are retained; the other factors are not included in the process.

#### 4.4.4 Interpret the Factors

The factor can be interpreted in terms of the variables that load high on it. In the rotated factor matrix of the Table 4.7, Factor 1 has high coefficient for variables Op. Cost to APA, Savings Rate, Income to APA, Capital to TA and Return On Equity; Factor 2 has

high coefficient for variables Cost Per Tk. Lent, Portfolio At Risk, Debt Service Cover Ratio and Op. Self Service; Factor 3 has high coefficient for variables Return On Equity, and KTAW; Factor 4 has high coefficient for variables Current Ratio, On Demand Realization; Factor 5 has high coefficient for variables Debt Equity Ratio and Reserve Rate.

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.809	26.718	26.718	4.809	26.718	26.718	4.447	24.705	24.705
2	2.994	16.633	43.351	2.994	16.633	43.351	2.970	16.497	41.203
3	1.981	11.007	54.358	1.981	11.007	54.358	2.025	11.248	52.451
4	1.818	10.101	64.459	1.818	10.101	64.459	1.726	9.587	62.038
5	1.214	6.747	71.206	1.214	6.747	71.206	1.650	9.168	71.206
6	.913	5.072	76.278						
.....	.....	.....	.....						
18	3.144E-16	1.746E-15	100.000						

Extraction Method: Principal Component Analysis.

Area	Ratio	Component				
		1 (D1)	2 (D2)	3 (D3)	4 (D4)	5 (D5)
MGT (D1)	Op. Cost to APA	.926	-.076	.023	-.027	-.014
	Savings Rate	.926	-.076	.023	-.027	-.014
	Income to APA	.802	.290	.040	-.148	-.068
	Capital to TA	.777	-.065	.118	-.058	.133
	Return on Equity	.700	-.091	.109	-.042	.054
	POCA	.516	-.104	-.197	.089	.419
AQ (D2)	Cost Per Tk. Lent	.062	.904	.060	-.157	-.075
	Portfolio at Risk	-.090	.871	.040	-.166	.038
	Debt Service Cover Ratio	-.106	.862	-.012	.172	-.012
	Op. Self Service	-.014	.711	-.012	.459	-.146
Ern (D3)	Return on Asset	.068	.115	.901	.036	.003
	KTAW	.043	-.028	.874	-.002	-.006
Liq (D4)	Current Ratio	-.008	.041	.072	.817	-.140
	On Demand Realization	.146	.038	.029	-.806	-.246
CA (D5)	Debt Equity Ratio	-.182	-.026	.010	-.084	.673
	Reserve Rate	.517	-.026	-.324	.106	.592
	Delinquency Rate	.518	-.072	.369	.237	.589
	Loan Loss Prov. Rate	.335	-.050	.359	.056	.436

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

#### 4.4.5 Determine the Mean of Preliminary Variables for Big and Small Partner Organisations (POs)

After determination of the preliminary variables this part of the study discusses the relevance of the 15 quantitative indicators for each of the five areas of CAMEL analyzed. It is derived by considering the average mean of the mean of 104 demonstrated small POs and the average of 8 top rated POs (including ASA, BRAC and TMSS) of PKSF which is randomly selected (Appendix VI and IX).

#### 4.5 Computation of Weight for the Variables by using Logit Model Measuring

##### Weight of 15 Preliminary Variables

The selection of 15 preliminary variables is based on the reference and sensitivity of the dimensions and vulnerability of MC. After selection of 15 variables, weight for the each indicator is determined by using the Taylor expression of logit model (Annex VI). In determining the weight for every indicator responsible for discriminating the big POs and small POs mean for every group for all 112 POs are expressed in terms of the operating income as a determinant of the capacity of a particular PO.

Then the weight for the individual indicator responsible as a percentage of the whole strength of the PO is determined. These weights can be positive negative or zero which indicates that a weight of an indicator for the big PO group can be negative if this particular indicator's impact is lower than the indicator of the small group PO to discriminate them within category or may be zero or positive if the impact are same or higher respectively.

Table 4.8: Weight Distribution among the Variables (level-I)

No	Area	Ratios	OOSA Mean	BIPOOL Mean	Mean (in terms of CPTL)		Weight
1	CA (D1)	DER	8.73	7.75	32.37	69.01	0.5179
2		RR	0.02	0.06	0.06	0.54	0.0067
3	AQ (D2)	CPTL	0.27	0.11	1.00	1.00	0.0000
4		PAR	0.06	0.14	0.22	1.25	0.0146
5		DSCR	2.36	1.79	8.76	15.90	0.1009
6		OSS	2.15	1.48	7.96	13.21	0.0742
7	Mgt. (D3)	ROE	0.25	0.08	0.91	0.69	-0.0031
8		IAPA	0.08	0.19	0.30	1.68	0.0196
9		OCAPA	0.05	0.13	0.17	1.16	0.0140
10		SR	0.07	0.30	0.25	2.70	0.0346
11		KTA	0.16	0.18	0.58	1.57	0.0140
12	Em (D4)	ROA	0.03	0.02	0.11	0.14	0.0005
13		KTAW	0.32	0.19	1.17	1.67	0.0071
14	Liq (D5)	CR	1.83	1.77	6.79	15.76	0.1268
15		ODR	0.90	0.95	3.33	8.44	0.0723
			17.25	15.12	63.99	134.73	1.00

#### 4.6 Determining the Final Variables Measuring Value for CAMEL Components

After determination of the weight for all 16 variables, the mean for all 112 POs is weighted averaged to get the composite value for the components of CAMEL in Table 4.9, which is standardized in terms of the CPTL (Cost Per Tk. Lent) as we do in terms of sales for business organisation.

No	Name	CA (D1)	AQ (D2)	Mgt (D3)	Earn (D4)	Liq(D5)
1	Ad-din	3.58	1.25	0.17	0.42	0.12
2	AFAUS	6.39	1.25	0.17	0.54	0.11
3	Prodipan	24.92	0.54	0.05	0.65	0.01
4	PSKS	9.12	0.97	0.28	8.52	3.18
5	SJK	-0.43	1.22	0.03	0.02	0.09
6	BASTAB	2.94	1.24	0.04	0.18	0.12
7	SACHETAN	0.17	1.12	0.03	1.58	0.47
8	GKT	6.37	1.24	0.09	0.39	-0.06
9	CREED	1.62	1.19	0.02	0.1	0.16
10	AF	15.01	1.04	0.1	-0.02	-0.04
11	HELP	7.67	1.21	0.03	0.19	0.05
12	MUK	1.8	1.2	0.14	0.24	0.09
13	ROVA	45.37	1.09	0.02	-0.89	0.29
14	NABOLOK	11.75	1.15	0.05	0.36	0.1
15	BSDO	3.27	1.24	0.02	0.39	0.13
16	ATMABISW	5.86	1.22	0.09	0.34	0.09
17	VARD	5.97	1.05	0.16	0	-7.97
18	NELS	5.02	1.19	0.01	-0.17	0.05
19	SSUS	3.56	1.21	0.01	0.11	0.08
20	DDAN	2.41	1.09	0.01	-0.09	0.07
.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....
105	TMSS	2.96	1.12	0.36	0.04	0.11
106	RRF	10.58	1.14	0.24	-0.23	0.08
107	SSS	7.04	1.22	0.34	0.28	0.12
108	Uddipan	12.18	1.22	0.37	0.05	0.07
109	Swanirva	6.32	1.05	0.21	0.1	0.17
110	JCF	6.55	1.14	0.3	0.19	0.1
111	ASA	0.6	0.53	0.49	0.7	1.67
112	BRAC	0.92	0.53	0.46	0.31	0.6

##### 4.6.1 Explain Why Selected Variables and Areas are Important

**Capital Adequacy (D1):** CA is the first major dimension of the MFI. The objective of the capital adequacy analysis is to measure the financial solvency of a PO by determining

whether the risks it has incurred are adequately offset with capital and reserves to absorb potential losses. One indicator is debt-equity ratio of the PO. A second indicator, adequacy of reserves is another quantitative measure of the PO's loan loss reserve and the degree to which the institution can absorb potential loan losses.

Capital Adequacy Ratio (CAR) measures an institution's solvency. The indicator provides information about ability to meet long-term expenses and obligations as well as absorb unanticipated future commitments. It provides better information than the existing R8: Liquid Ratio. CAR measures an institution's resiliency against both expected and unexpected losses, which may result from endogenous and exogenous causes. It is in line with Basel II calculations.

**Asset Quality (D2):** Asset Quality is the second major dimension identified which has a significant influence on CPTL, PAR, DSCR and OSS and measures the quality of the PO's portfolio. CPTL measures the cost incurred by the MFI for lending 1.00 taka which indicates the efficiency of the operation to maintain the quality of the portfolio. Cost Per Tk. Lent made ratio highlights the impacts of the turnover of the loan portfolio on operating cost. The most accepted measure of portfolio quality. The most common international measurements of PAR are > 30 days and > 90 days. This is the true measure of the delinquent loans. PAR indicates the Portfolio At Risk which is a major challenge of the MFI. PAR can discriminate the MFIs from bad ones to good ones. The MFIs, which do not perform well and quality of the portfolio is not good, need extra care. So if the situation is identified earlier that could be managed and addressed. DSCR indicates whether or not enough revenue has been earned to cover both interest and principal payment. DSCR is a ratio which indicates the capacity to repay the interest and principal of the loan taken by an MFI. OSS indicates operational self sufficiency of the MFI which measures how well an MFI can cover its costs through operating revenues.

**Management (D3):** Management is the third major dimension identified which has a significant influence on Operational Cost to Average Performing Asset (OCAPA), Savings Rate, Income to APA (IAPA), Capital to TA (KTA), and Return on Equity (ROE) of the MFI and measures the quality and capacity of the PO's Management. The quantitative indicators- OCAPA, IAPA are derived from cost structure analysis which indicates the different operational and financial costs. This is based on the performing asset which has the direct relation with the performance of management. It represents the

total cost of certain percent of average performing assets which include all levels of cost coverage i.e. the operational cost, financial and loan loss provision cost. This analysis checks how efficiently the organisation is covering all the actual cost from the income of micro credit project, which also indicates the rate of change in capital, either increase or decrease. Return on Equity (ROE) measures the ability of the institution to maintain and increase its net worth through earnings from operations which is directly related with the sustainability and capacity of the management of an MFI.

Capital to TA (KTA) denotes the percentage of capital in terms of the total assets. It indicates the adequacy of the capital. Maintaining of this ratio properly is a capacity of the efficient operation of the MFI which indicates the capacity of the management.

SR denotes the percentage of the saving outstanding in terms of the loan outstanding which is related with the protection and emergency uses of the client. If this ratio could be maintained properly the security of the client will increase, which indicates the quality of the management. There is sensitivity with the accurate proportion of the ratio which will be detrimental for the MFI as well as for the client.

**Earnings (D4):** Earnings is one of the major area for evaluating an MFI, which has influence over Return on Asset and Capital to TA without FA (KTAW) which measures the capacity of the PO's earnings. These two indicators are to measure the profitability and earnings of PO. The profitability analysis shows the analysis of profitability derived from the performing asset. Return on assets (ROA) measures how well the PO's assets are utilised, or the institutions ability to generate earnings with a given asset base.

**Liquidity Management (D5):** The analysis of liquidity management is divided into two quantitative indicators. Current ratio and on demand realization which measure the liquidity management capacity of the PO. This is the fifth area to evaluate the PO's ability to accommodate decreases in funding sources and increases in assets and to pay expenses at a reasonable cost. Indicators in this area check the availability of cash to meet credit demand. Current asset to current liability is the acid test of an organisation, which evaluates the organisation's instant capacity to pay the current liability.

#### 4.7 Conducting Linear Discriminant Analysis (LDA)

The steps involved in conducting discriminant analysis consist of formulation estimation, determination of significance, interpretation and validation. These steps are to be performed in the following way:

Figure 4.2: LDA Process		Steps
Formulate the problem		Step-I
Estimate discriminant function coefficient		Step-II
Determine the significance of the determinant function		Step-III
Interpret the results		Step-IV
Assess the validity of the discriminant analysis		Step-V

Based on the objective, in step-I criterion variable and the independent variables formulation of the problem of the research is performed. The dependent variable is here ratio (Level-I) /interval (level-II) scaled which is converted into two categories small and big. The predictor variables are selected based on the process as mentioned above (FA and weighting.) The next step is to divide the sample into two parts, analysis sample and the validation sample, as mentioned in the methodology. If there is 100% rightly classified from the result, it should be 100% rightly classified from the validation sample.

#### 4.7.1 Estimating the Discriminant Function Coefficients

After identification of the final variables of the model equation we can estimate the discriminant function coefficients. Direct method involves estimating the discriminant function so that all the predictors are included simultaneously. In this case each independent variable is included regardless of its discriminating power. The results of LDA are presented below:

Table 4.10: Group Statistics					
PO Category		Mean	Std. Deviation	Valid N (list wise)	
				Un weighted	Weighted
Small	Capital Adequacy	6.9954	6.84249	104	104.000
	Asset Quality	1.1192	.23246	104	104.000
	Management	.0539	.05263	104	104.000
	Earnings	.2507	.94253	104	104.000
	Liquidity	.4287	2.70559	104	104.000
Big	Capital Adequacy	5.8938	4.22193	8	8.000
	Asset Quality	.9937	.29140	8	8.000
	Management	.3462	.09739	8	8.000
	Earnings	.1800	.26950	8	8.000
	Liquidity	.3650	.55547	8	8.000
Total	Capital Adequacy	6.9167	6.68211	112	112.000
	Asset Quality	1.1103	.23781	112	112.000
	Management	.0748	.09427	112	112.000
	Earnings	.2456	.91063	112	112.000
	Liquidity	.4241	2.61005	112	112.000



#### 4.7.2 Determining the Significance of Discriminant Functions

It would be meaningful to interpret the model if the functions estimated for the model are statistically significant. The null hypothesis that, in the population, the means of all discriminant functions in all groups are equal can be statistically tested. In SPSS, it is based on Wilks'  $\Lambda$ . If the several functions are tested simultaneously, the Wilks'  $\Lambda$  statistic is the product of univariate  $F$  for each function. The significance level is estimated based on a chi-square transformation of the statistic. In testing for significance in the study it may be noted that the Wilks'  $\Lambda$  associated with the function is 0.307 which is transformed to a chi-square of 126.906 with 5 degrees of freedom. The analysis shows that this is significant beyond the 5% level. This indicates that the null hypothesis is rejected which justifies to proceed the study further as there is discrimination among the group means.

Table 4.11a: Level of significance

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	2.256 <sup>a</sup>	100.0	100.0	0.832

a. First 1 canonical discriminant functions were used in the analysis.

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.307	126.906	5	.000

The Eigen value associated with this function is 2.256 and it accounts for 100% of the explained variance. The canonical correlation associated with this function is 0.832. The square of this correlation is  $(0.832)^2 = 0.692$  which indicates that 69 percent of the variance in the dependent variable is explained or accounted for by this model. These indicate that there is significant discrimination between the categories.

Figure 4.3:A Canonical Discriminant Function

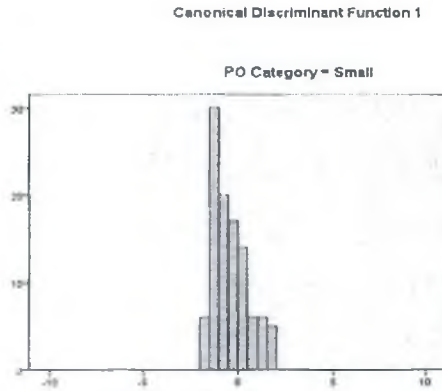


Figure 4.3A: Canonical Discriminant Function (Small)

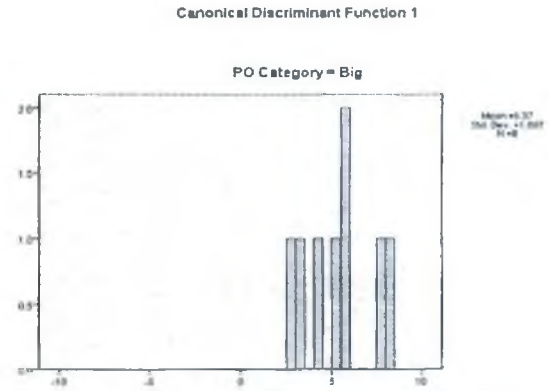


Figure 4.3B: Canonical Discriminant Function (Big)

### 4.8 Derivation of Model for Quantitative Aspects

After screening by avoiding duplication and conducting Factor Analysis 14 ratios are considered significant which are coincidentally in the same five traditional areas of CAMEL. Considering the aspects do matter in rating MFIs and volatile nature and dimensions of microcredit, the following coefficients and constant (Table 4.12-13) are the major outputs of LDA which can measure the strength and performance of the individual MFI based on the discriminant score (Table 4.14) and discriminate the MFIs by category as well as by within category (Table 4.13). This also presented graphically in Figure 4.3 and 4.4.

Table 4.12: Function Coefficients

Classification Function Coefficients		
	PO Category	
	Small	Big
Cap Ade	.225	.282
Asset Qua	20.421	17.877
Mgt	20.081	132.858
Earnings	-.223	-3.276
Liquidity	.011	.496
(Constant)	-13.425	-33.203

Canonical Discriminant Function Coefficients	
Fisher's linear discriminant functions	
Function 1	
Capital Adequacy	.010
Asset Quality	-.440
Management	19.512
Earnings	-0.528
Liquidity	.84
(Constant)	-.945
Unstandardized coefficients	

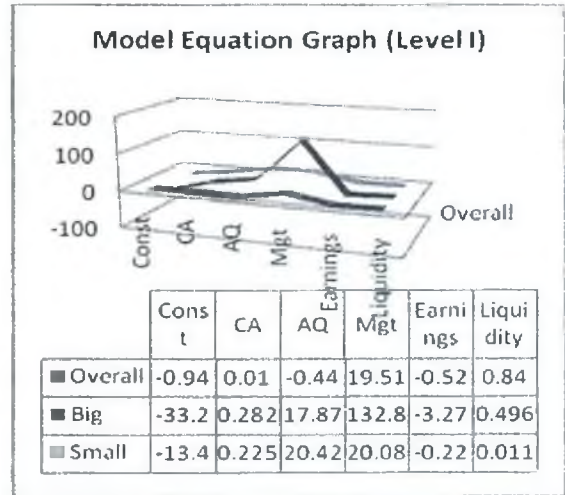
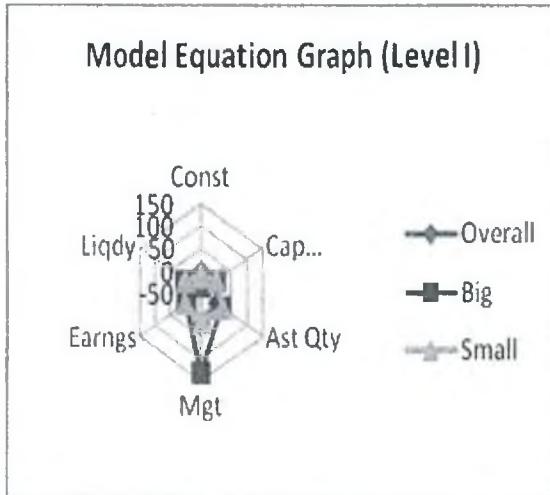
Table 4.13: Model Equation- Level-I

	Const	CA	AQ	Mgt	Earnings	Liquidity
Overall	-0.945	0.010	-0.440	19.512	-0.528	0.84
Big	-33.203	0.282	17.877	132.858	-3.276	0.496
Small	-13.425	0.225	20.421	20.081	-0.223	0.011

Figure 4.4 Graphical Presentation of the Model Equation

Figure 4.4 (a) Radar view of the Model Equation

Figure 4.4 (b) 3 D Line view of the Model Equation



All the graphical demonstration irrespective of the category of the model shows the variable management contributes highest.

Table 4.14: Discriminant Scores- Level-I

Original Case Number	Actual Group	Predicted Group	Highest Group				Second Highest Group			Discriminant Scores
			P(D>d   G=g)		Squared Mahalanobis Distance to Centroid	Group	P(G=g   D=d)	Squared Mahalanobis Distance to Centroid	Function 1	
			p	df						
1	1	1	.987	1	.999	.000	2	.001	13.161	-.274
2	1	1	.504	1	.984	.445	2	.016	8.666	.409
3	1	1	.600	1	.990	.274	2	.010	9.533	.266
4	1	1	.600	1	.990	.274	2	.010	9.533	.266
5	1	1	.600	1	.990	.274	2	.010	9.533	.266
6	1	1	.381	1	.966	.769	2	.034	7.477	.619
7	1	1	.017	1	1.000	5.667	2	.000	35.902	-2.638
.....	...	...	.....	...	.....	.....	...	.....	.....	.....
.....	...	...	.....	...	.....	.....	...	.....	.....	.....
110	2	2	.469	1	.980	.523	1	.020	8.339	2.630
111	2	2	.059	1	1.000	3.576	1	.000	30.275	5.244
112	2	2	.339	1	1.000	.915	1	.000	20.867	4.310

## CHAPTER FIVE

### MODEL DEVELOPMENT–QUALITATIVE ASPECTS

Microcredit emerges as a new approach to fight poverty. The challenges of an MFI and challenges of a business organization are different here for its different missions and visions. The main challenge here is to combining the social and business mission. The challenges include the selection of variables that do matter in evaluation. The matters include some dilemma like; dilemma of qualitative vs. quantitative; dilemma of social vs. financial performance; dilemma of practices of good governance vs. financial performance; dilemma of serving excluded vs. financial performance; dilemma of trade-off between financial and social performance.

This part of the study describes the way it has developed the model for qualitative aspects. It has made the exploration and identification of potential areas and variables do matter in evaluating MFIs for qualitative aspects by the apex body, donors, investors and the evaluators. After that the chapter performs screening by avoiding duplication of the number of areas and variables and by conducting Factor Analysis eventually. Different business concepts including the Hermes' Approach have been used to derive the major areas and variables. Then get a feedback for the quantitative aspects through a questionnaire based on a 5 point scale using the selected variables from the concern of the same-POs; After getting the feedback, mean of the responses for big and small POs is computed and the weight is determined by using Logit model; Finally, Linear Discriminant Analysis (LDA) has been conducted the data for 112 POs for the derivation of the model for qualitative aspects.

#### 5.1 Issues to be considered for Model Development: Qualitative Aspects

Is social performance profitable? Does MC work? “What's wrong with microfinance?” and especially in ‘A practitioner’s view of the challenges facing NGO-based microfinance in Bangladesh’ which actually discussed some important problems of MC; some of which arise from exaggerated expectations, some from bad design and mismanagement and some from erroneous basic policies (Dichter, T., & Harper, M. 2007). Microfinance has been around since the 1980s, and in 2005 it enjoyed the accolade of a UN international year and Nobel Prize for Dr. Yunus and GB is for the promotion of MC and development of humanity. The reasons for this success are obvious.

The social and ethical basis for microfinance as an activity creates a need to rate and benchmark peer groups on non-financial dimensions like mission alignment, depth of outreach, and financial inclusion. However, there are far more difficult methodological and definitional issues than there are in peer group benchmarking based on size, clientele and modes of delivery, presenting a highly complex challenge. In particular, social mission and goals are usually seen as something unique to each institution in comparison with financial goals which appear more easily standardized. Or at least they appear so now, after several years of debate around the key indicators for profitability, sustainability and efficiency. Recent microfinance research has focused on developing a clearer understanding of social performance and defining relevant indicators and methodologies for social assessment. Rating agencies are responding by providing a separate assessment of an MFI's social performance which can be viewed side by side with the credit rating. A social rating is designed by CERISE<sup>1</sup> (Social Performance Indicators Initiative) to assess whether an MFI and the Imp-Act program (Social Performance Management) adheres to its (explicit or implicit) social mission and has systems in place to ensure this, consistent with accepted values of social responsibility. The rating includes an assessment of outreach – to underserved areas and poor clients – and appropriateness of products.

The social rating is undertaken via staff discussions, systems review, and analysis of available data and study reports. The approach developed by M-CRIL<sup>2</sup> includes a field-level sample survey and focus group discussions (FGDs) carefully designed to provide a socio-economic profile and substantive feedback from clients. This is the “fat” or comprehensive approach and has evolved, incorporating ideas from the framework of the CERISE social performance indicators initiative and the Imp-Act program based in the UK. A “thin” approach, is also being tested. This relies on proxy indicators available from MFI data – such as the ‘number and range of products’ for product appropriateness, and the ratio of average outstanding loan to per capita GNI for depth of outreach – without independent field assessment. Social Performance indicates how an MFI is performing in reaching social goals like women in development creating an educated mother, empowering women. While social services such as nutrition, education, literacy training is

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<sup>1</sup> CERISE (*Comité d'Echanges de Réflexion et d'Information sur les Systèmes d'Epargne-crédit*), is a knowledge exchange network for microfinance practitioners. Founded in 1998, CERISE is richly diverse, bringing together a variety of practitioners, researchers, donors and investors from the North and South. CERISE was founded out of the desire of its five members to share and learn from each other.

<sup>2</sup> M-CRIL is a global leader in the financial rating of microfinance institutions and in sectoral advisory services.

offered by the state, a local NGO or an MFI (with or without assistance from IOs) has chosen to provide social services in addition to financial intermediation. In this way they (MFIs) are able to take advantage of contact with clients during loan disbursement and repayment. As in the case of enterprise development services, the delivery and management of social services should be kept as distinct from the delivery and management of financial intermediation services. This does not mean that social services cannot be provided during group meeting, but they must be clearly identified as separate from credit and savings services. Furthermore, MC in this stage is not reasonable to expect that revenue generated from financial intermediation will always cover the cost of delivering social services. Rather, the delivery of social services will most likely require ongoing subsidies. MFIs that choose to provide social services must be clear about the cost incurred and must ensure that the donors supporting the MFI understand the implications of providing these services (Ledgerwood 1998).

On the other hand, studies found that business and Enterprise transformation programs need training and technology to help existing microenterprises make quantitative and qualitative leap in terms of scale of production and marketing. MFIs adopting an integrated approach often provide some type of enterprise development services which include a wide range of nonfinancial interventions.

## **5.2 Explore and identify potential areas and variables**

There is much literature on bank efficiency, but very little on microfinance efficiency. Should we assess microfinance institutions efficiency the way banks do, taking into account financial inputs and outputs? This tends not to be the case; Morduch (1999) observes that discussions on microcredit performance almost ignore financial matters. Yaron (1994) suggested a framework, based on the dual concepts of outreach and sustainability, that has become popular in the assessment of MFIs performance; Navajas *et al.* (2000), Schreiner and Yaron (2001). Outreach accounts for the number of clients serviced and the quality of the products provided. Sustainability implies that the institution generates enough income to at least repay the opportunity cost of all inputs and assets; Chaves and González-Vega (1996). It is difficult to think of a sustainable MFI with poor financial management; Johnson and Rogaly (1997). Sustainability has two levels: operational and financial (see, for example CGAP, 2003). Moreover, the study found that different initiatives as mentioned earlier have taken and developed a number of rating

system from different platform to address this issue.

Corporate Good Governance Principles of Business Enterprises by ADB and Hermes (2003), Corp. Social Responsibility (ISO 26000); and Corporate Ethics (CFA institute 2005); Microfinance's Double Bottom Line Measuring Social Return for the Microfinance Industry by Tulchin (2003); Sharma (2004); Stakes of Measuring Social Performance in Microfinance François Doligez, IRAM1-University of Rennes 1& Cécile Lapenu, CERISE2 2006; Pitt M. & Khanker S. (1999); Household and Intra household Impact of the Grameen Bank and Similar Targeted Credit Programs in Bangladesh, World Bank Discussion Paper, 320; CERISE, 2005: Social performance indicators Initiative uses the following potential variables from which the potential variables may be selected. Other than the six principles of the client protection campaign like avoidance of over-indebtedness; Transparent Pricing; Appropriate collections Practices; Ethical Staff behavior; Mechanisms for redress of grievances and privacy of client data the different business model like Hermes' Approach and ISO 26000 as well as the corporate social principles (Appendix VIII) have been used to derive the major areas and variables.

### 5.3 Screening the Number of Areas and Variables by Avoiding Duplication

Microfinance is a powerful instrument against poverty. Keeping the missions and visions of microcredit in mind these 14 areas are considered suitable for measuring non-financial as well as quantitative aspects that do matter in rating MFIs and derived from the literature review.

Dimension/Area/Variables	Explanation
<b>Dimension 1(D1): Orientation towards poor or marginalized clientele not having access to the banking sector</b>	
Targeting and outreach (D1) to operate in an area where no other financial services are available, purposely selects clients based on poverty levels or exclusion, to reach the poor or excluded.	Addresses the poor or marginalized clientele not having access to the banking sector.
<b>Dimension 2 (D2): Diversification of services so as to adapt them to the needs of the specific client</b>	
High quality, innovative and nonfinancial services.	Addresses diversification of services.
<b>Dimension 3 (D3): Establishing relationships of trust with its clients and strengthening their political and social capital</b>	
Build social capital by fostering trust and transparency, encouraging participation and developing activities that promote empowerment.	Addresses trust with its clients and strengthening their political and social capital.
<b>Dimension 4 (D4): the institution's social responsibilities with respect to its stake holders</b>	

Social responsibility by guaranteeing respect of consumer protection principles to the community and the environment by respecting the context where the MFI operates.	Addresses trust with its clients and strengthening their political and social capital.
<b>Dimension 5 (D5): Social Return on Investment (SROI)</b>	
Economic, socio-economic, and social.	Applies financial ratio formats for social measurement.
<b>Dimension 6 (D6): Wealth of Nations Triangle Index (WTI)</b>	
economic environment, social environment, and information exchange.	Visually represents complex information; indexes data.
<b>Dimension 7 (D7): Corporate Governance</b>	
Emphasis on performance orientation, nomination and compensation committees, disclosure, audit committee, code of conduct, conflicts of interest, environmental and social commitment, conduct of the board of directors, responsibilities of investors, the role of directors in turnaround situations.	Ensure the services to the poor maximizing efficiency, ethics, transparency and minimizing the conflicts of interest and cost not only for financial profit but also social benefit which will expedite sustainability.
<b>Dimension 8 (D8): ISO 26000: 2010</b>	
Integrating, implementing and promoting socially responsible behavior throughout the organization and, through its policies and practices.	Ensure the services to the poor as per the guidance of the industry, ethics, transparency and minimizing the conflicts of interest and cost for not only financial profit but also social benefit which will expedite sustainability.
<b>Dimension 9 (D9): Corporate Ethics</b>	
Emphasis on transparency and code of conduct on performance orientation, nomination and compensation committees, disclosure, audit committee, conflicts of interest, environmental and social commitment, conduct of the board of directors, responsibilities of investors, the role of directors in turnaround situations	Ensure the guidance of the industry, ethics, transparency and social benefit which will expedite sustainability.
<b>Dimension 10 (D10): Global Reporting Initiative (GRI)</b>	
Publishes social responsibility guidelines to establish uniform reporting standards.	Ensure the uniform standard of reporting.
<b>Dimension 11 (D11): The Client Protection Principles</b>	
By avoidance of over-indebtedness, transparent and responsible pricing, appropriate collections practices, ethical staff behavior, mechanisms for redress of grievances, privacy of client data.	Ensure total protection of the client.
<b>Dimension 12 (D12): Principles of Sustainable Microfinance</b>	
Microfinance services must fit the needs and preferences of clients, Poor households and communities need a variety of financial services, not just loans.	Ensure the sustainability of the client by increasing the outreach.
<b>Dimension 13 (D13): Triple Bottom Line</b>	
The triple bottom line is made up of "social, economic and environmental" the "people, planet, profit"	Ensure the total development of the client as well as the MFIs.
<b>Dimension 14 (D14): Double Bottom line</b>	
The double bottom line is made up of "social and aspects"	Ensure outreach and sustainability.



#### 5.4 Sum up the Exploration and Selection of Potential Performance Indicators

Based on the above discussion initiatives have been taken to identify the areas and the qualitative aspects to measure performance of the MFIs. Here the issues identified and checked considering the dimensions of MC are Excluded People, Good governance, Poverty reduction and Social Responsibility which areas are may be addressed by the following issues: response in disaster, internal control, interest rate, cash flow project, over indebtedness, ethical practices, business plan, good government practices, program coverage, efficiency, insurance, year of services, loan classification, service charge, reserve, number of EC meeting held this year and last AGM held These dimensions are analyzed through Factor Analysis.

#### 5.5 Selection of Preliminary Variables and Major Areas eventually by conducting FA

Factor Analysis are conducted, examined and represented where each variable is expressed as a linear combination of underlying factors as mentioned earlier. The same process is applied for reducing factors (Figure 5.1). In this way, the factors can be estimated so that their factor scores, unlike the values of the original variables, are not correlated. Furthermore, the first factor accounts for the highest variance in the data, the second factor the second highest, and so on. Special statistics are associated with factor analysis.

Figure 5.1: FA Process	Steps
Formulate the Problem	Step-I
Construct the correlation matrix	Step-II
Determine the method of FA	Step-III
Rotate the factors	Step-IV
Interpret the factors and select the major areas and variables	Step-V

These steps are conducted as mentioned earlier in the following way:

##### 5.5.1 Formulate the Problem

Problem formulation includes the identification of the variables to be included in the factor analysis is specified earlier based on past research, theory and judgment of the researcher explored earlier. To illustrate the analysis, the study shows the determination of the underlying influence among the variables. The potential data (Appendix IX) obtained from the analysis are given in Table 5.2. A sample of 17 variables is selected from the exploration.

**Table 5.2 Descriptive Statistics**

	Mean	Std. Deviation <sup>a</sup>	Analysis N <sup>a</sup>	Missing N
Yr of Services.(SP3)	4.30	1.341	112	0
No of EC meeting this Yr(SP1)	3.42	1.528	112	0
Last AGM Held(SP2)	2.83	.482	112	0
Service charge (GG2)	3.13	.822	112	0
Loan class. (GG1)	3.12	.956	112	0
Reserve (GG3)	3.04	.816	112	0
Business plan (SR7)	2.63	.838	112	0
Cash flow Proj. (SR4)	2.46	.770	112	0
Internal control (SR2)	2.40	.915	112	0
Progm. coverage (Ex1)	1.66	.679	112	0
Response in disaster (SR1)	2.43	.993	112	0
Interest rate (SR3)	2.35	.956	112	0
Ethical practices (SR6)	2.52	.827	112	0
Over indebttness (SR5)	2.29	.832	112	0
Good Govt attitude (GG4)	2.18	.819	112	0
Efficiency (Ex2)	1.62	.883	112	0
Insurance (Ex3))	1.43	.719	112	0

a. For each variable, missing values are replaced with the variable mean.

### 5.5.2 Determine the Method of Factor Analysis

Principal Components Analysis is recommended as mentioned earlier.

### 5.5.3 Determine the Number of Factors

FA is conducted keeping only factors having large coefficients and with eigen value greater than 1.0 are retained; the other factors are not included in the process are presented in Tables 5.3 ,5.4 and Figures 5.2 and 5.3.

**Table 5.3: Rotated Component Matrix<sup>a</sup>**

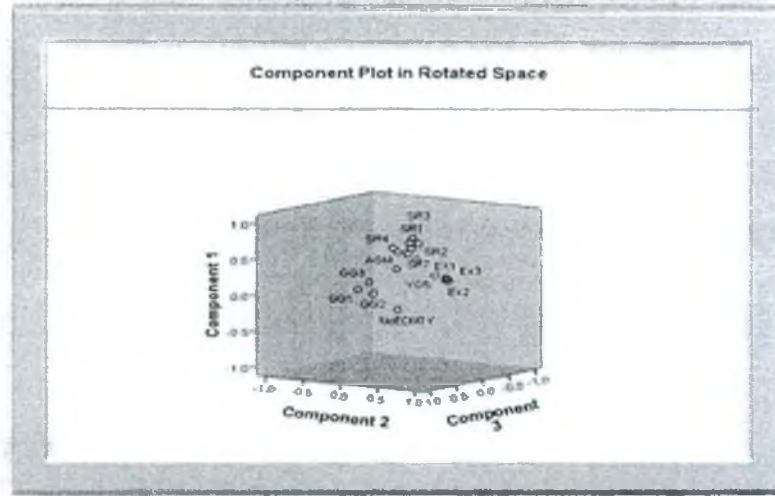
	Component			
	1	2	3	4
Response in disaster (SR1)	.776	.223	.052	-.009
Internal control (SR2)	.723	.218	.093	-.147
Interest rate (SR3)	.716	.325	.084	.024
Cash flow Proj. (SR4)	.693	.198	.393	.020
Over indebttness (SR5)	.662	.315	.213	.138
Ethical practices (SR6)	.631	.236	.350	.250
Business plan (SR7)	.598	.306	.257	.331
Good Govt attitude (GG4)	.532	.449	.294	-.050
Progm. coverage (Ex1)	.303	.793	.217	-.009
Efficiency (Ex2)	.257	.786	.161	-.087
Insurance (Ex3))	.267	.768	.190	-.022
Yr of Services.(SP3)	.279	.498	.009	.198
Loan class. (GG1)	.163	.057	.866	.017
Service charge (GG2)	.124	.260	.847	.057
Reserve (GG3)	.267	.171	.811	.000
No of EC meeting this Yr (PR1)	-.221	.064	.113	.816
Last AGM Held (SR2)	.299	-.080	-.073	.670

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Figure 5.2: Component Plot in Rotated Space

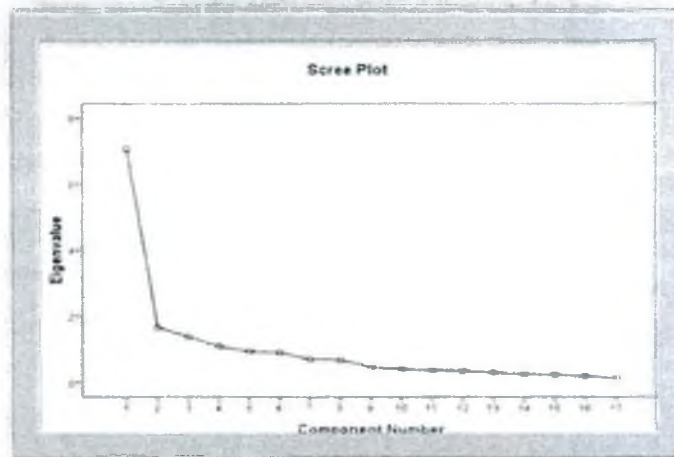


**Table 5.4: Total Variance Explained**

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.065	41.561	41.561	7.065	41.561	41.561	4.152	24.423	24.423
2	1.654	9.731	51.292	1.654	9.731	51.292	2.889	16.996	41.419
3	1.373	8.076	59.367	1.373	8.076	59.367	2.744	16.142	57.560
4	1.074	6.320	65.687	1.074	6.320	65.687	1.382	8.127	65.687
5	.924	5.433	71.120						
.....	.....	.....	.....						
17	.132	.778	100.000						

Extraction Method: Principal Component Analysis.

Figure 5.3: Scree Plot



### 5.5.4 Interpret the Factors

The factor can be interpreted in terms of the variables that load high on it. In the rotated factor matrix of the table 5.4. Factor 1 has high coefficient for the variables Response in disaster (SR1), Internal control (SR2), Interest rate (SR3), Cash flow Proj. (SR4), Over indebtedness (SR5) and Ethical practices (SR6); Factor 2 for the variables Program coverage (Ex1), Efficiency (Ex2). Factor 3 for the variables Loan classification (GG1), Service charge (GG2) and Reserve (GG3); and Factor 4 for the variables Last AGM Held (PR1), No. of EC meeting this Yr (PR2) and Insurance (PR3).

<b>Dimension/Area/variables</b>	<b>Explanation</b>
<b>Commitment to Good Governance (GG)</b>	
Loan Class. (GG1); Service Charge (GG2); Reserve policy (GG3)	Address good governance to ensure quality transparency in providing financial services.
<b>Commitment to serve the Excluded People (Ex)</b>	
Progm. Coverage (Ex1); Efficiency (Ex2); and Insurance (Ex3).	Addresses commitment to serve the excluded People.
<b>Commitment to Social Responsibility (SR)</b>	
Response in disaster (SR1); Internal Control (SR2); Interest Rate (SR3); Cash flow Proj. (SR4); Over indebtedness (SR5); Ethical practices (SR6);	Addresses commitment to Social Responsibility (SR)
<b>Commitment to Poverty Reduction (PR)</b>	
No of EC meeting this Yr.(PR1), Last AGM Held(PR2);	Addresses how efficiently can serve the purpose of the client service purpose by ensuring accountability.

**Table 5.6: KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.854
Bartlett's Test of Sphericity	Approx. Chi-Square
	1.007E3
	df
	136
	Sig.
	.000

The above measure of KMO verify whether the distribution of values is adequate or not for conducting factor analysis. It has a very high value of 0.854 which indicates the adequacy of sample size and Bartlett's test found that it has a very small value of 1.007E3 which indicates that the correlation matrix is not an identical matrix and it differs significantly from identity and thus multivariate analysis is approximately normal and acceptable for factor analysis.

**Table 5.7 Correlation Matrix**

	YOS (SP3)	ECM (SP1)	AGM (SP2)	SC (GG2)	LnCl (GG1)	Res (GG3)	BusPlan (SR7)	CFP (SR4)	InCol (SR2)	ProCov (Ex1)	RiD (SR1)	InR (SR3)	Ethprac (SR6)	Ovin (SR5)	GGA (GG4)	Eff (Ex2)	Ins (Ex3)
YOS(SP3)	1.000	-.041	.192	.224	.162	.179	.372	.292	.303	.401	.253	.310	.352	.317	.311	.335	.331
ECM(SP1)	-.041	1.000	.232	.084	.040	.038	.191	-.057	-.186	.000	-.078	-.027	.076	-.017	.012	-.100	-.001
AGM(SP2)	.192	.232	1.000	.035	.082	.061	.157	.113	.136	.043	.210	.149	.200	.212	.032	.057	.030
SC (GG2)	.224	.084	.035	1.000	.702	.678	.386	.458	.227	.438	.227	.250	.414	.352	.406	.332	.374
LC (GG1)	.162	.040	.082	.702	1.000	.676	.222	.405	.173	.270	.232	.281	.390	.332	.341	.277	.241
Res(GG3)	.179	.038	.061	.678	.676	1.000	.388	.462	.319	.380	.326	.319	.453	.383	.462	.357	.358
Bus plan (SR7)	.372	.191	.157	.386	.222	.388	1.000	.693	.417	.445	.428	.464	.653	.539	.582	.356	.412
CFP (SR4)	.292	-.057	.113	.458	.405	.462	.693	1.000	.608	.454	.461	.505	.631	.498	.527	.379	.458
IC(SR2)	.303	-.186	.136	.227	.173	.319	.417	.608	1.000	.454	.473	.405	.496	.475	.541	.315	.434
Prog cov (Ex1)	.401	.000	.043	.438	.270	.380	.445	.454	.454	1.000	.418	.462	.460	.492	.580	.668	.633
RID (SR1)	.253	-.078	.210	.227	.232	.326	.428	.461	.473	.418	1.000	.762	.451	.548	.559	.426	.371
IR (SR3)	.310	-.027	.149	.250	.281	.319	.464	.505	.405	.462	.762	1.000	.476	.576	.541	.502	.410
EP (SR6)	.352	.076	.200	.414	.390	.453	.653	.631	.496	.460	.451	.476	1.000	.634	.368	.398	.426
Ovin (SR5)	.317	-.017	.212	.352	.332	.383	.539	.498	.475	.492	.548	.576	.634	1.000	.440	.445	.471
GGA (GG4)	.311	.012	.032	.406	.341	.462	.582	.527	.541	.580	.559	.541	.368	.440	1.000	.457	.481
Eff (Ex2)	.335	-.100	.057	.332	.277	.357	.356	.379	.315	.668	.426	.502	.398	.445	.457	1.000	.630
Insu (Ex3)	.331	-.001	.030	.374	.241	.358	.412	.458	.434	.633	.371	.410	.426	.471	.481	.630	1.000
YOS(SP3)		.335	.021	.009	.044	.029	.000	.001	.001	.000	.004	.000	.000	.000	.000	.000	.000
ECM(SP1)			.007	.189	.336	.344	.022	.276	.025	.498	.207	.389	.213	.429	.452	.147	.495
AGM (SP2)				.357	.194	.260	.049	.118	.077	.327	.013	.059	.017	.012	.370	.274	.378
SC(GG2)					.000	.000	.000	.000	.008	.000	.008	.004	.000	.000	.000	.000	.000
LnCl(GG1)						.000	.009	.000	.034	.002	.007	.001	.000	.000	.000	.002	.005
Res (GG3)							.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Bus plan (SR7)								.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
CFP(SR4)									.000	.000	.000	.000	.000	.000	.000	.000	.000
IC (SR2)										.000	.000	.000	.000	.000	.000	.000	.000
ProCov (Ex1)											.000	.000	.000	.000	.000	.000	.000
RiD (SR1)												.000	.000	.000	.000	.000	.000
IR(SR3)													.000	.000	.000	.000	.000
EthPrac (SR6)														.000	.000	.000	.000
Ovin (SR5)															.000	.000	.000
GGA (GG4)																.000	.000
Eff (Ex2)																	.000
Insu (Ex3)																	

### 5.6 Determine the Mean of Preliminary Variables for Big and Medium Partner Organisations (POs)

This part of the study discusses the relevance of the 14 qualitative indicators for four major areas like CSR, CEx, CGG and CPR, as analyzed earlier. It is derived by considering the average mean of the mean of 104 demonstrated small POs and the average of 8 top rated POs (including ASA, BRAC and TMSS) of PKSf which are randomly selected.

No	Area	Issue	OOSA mean	BIPOOL mean
1	CSR	Response in disaster (SR1)	2.63	3.13
2		Internal control (SR2)	2.08	3.75
3		Interest rate (SR3)	3.18	3.38
4		Cash flow Proj.(SR4)	2.31	2.88
5		Over indebtness (SR5)	2.33	3.38
6		Ethical practices (SR6)	2.71	3.13
7	CEX	Prog. coverage (Ex1)	1.85	3.63
8		Efficiency (Ex2)	2.40	3.75
9		Insurance (Ex3)	2.67	3.63
10	CGG	Loan classification (GG1)	3.21	3.50
11		Service charge (GG2)	3.05	3.25
12		Reserve (GG3)	3.15	3.63
13	CPR	Nos of EC meeting held (PR1)	3.46	2.75
14		Last AGM held (PR2)	2.82	3.00

### 5.7 Computation of Weight for the Variables by Using Logit Model

However, the selection of 14 preliminary variables is based on the reference and sensitivity of the dimensions and vulnerability of MC. After selection of these 14 variables, weight for the each indicator is determined by using the Taylor expression of Logit model (Appendix VII). In determining the weight for every indicator responsible for discriminating the big POs and small POs mean for every group for all 112 POs is expressed in terms of the operating income as a determinant of the capacity of a particular PO.

Then the weight for the individual indicator responsible as a percentage of the whole strength of the PO is determined as mentioned earlier.

No	Area	Variables	OOSA mean	BIPOOL mean	Weight	Percent
1	CSR	Response in disaster (SR1)	2.63	3.13	0.0562	0.49
2		Internal control (SR2)	2.08	3.75	0.1879	
3		Interest rate (SR3)	3.18	3.38	0.0216	
4		Cash flow proj.(SR4)	2.31	2.88	0.0637	
5		Over indebtness (SR5)	2.33	3.38	0.1177	
6		Ethical practices (SR6)	2.71	3.13	0.0464	
7	CEX	Prog. coverage (Ex1)	1.85	3.63	0.1998	0.46
8		Efficiency (Ex2)	2.40	3.75	0.1512	
9		Insurance (Ex3)	2.67	3.63	0.1069	
10	CGG	Loan classification (GG1)	3.21	3.50	0.0324	0.11
11		Service charge (GG2)	3.05	3.25	0.0227	
12		Reserve (GG3)	3.15	3.63	0.0529	
13	CPR	No. of EC meeting held (PR1)	3.46	2.75	-0.0799	-0.06
14		Last AGM held (PR2)	2.82	3.00	0.0205	
			37.85	46.75		

### 5.8 Determining the final variables for qualitative aspects

After determination of the weight for all 14 variables the mean for all 112 POs is weighted averaged to get the composite value for the components of major four areas of CSR, CEx, CGG and CPR (Table 5.10).

		Name	CSR	CEx	CGG	CPR
1	1	Ad-din	1.92	4.00	4.00	-4.35
2	2	AFAUS	3.35	2.13	4.00	-7.04
3	22	Prodipan	1.90	3.11	1.91	-3.00
4	23	PSKS	2.18	3.00	4.00	-5.69
5	29	SJK	2.18	1.57	4.00	-1.65
6	44	Bastab	2.08	2.00	2.00	-3.00
7	45	SACHETAN	2.06	3.00	3.79	-1.65
8	49	GKT	2.82	3.33	4.00	-4.35
--	--	--	--	--	--	--
--	--	--	--	--	--	--
105	37	TMSS	4.63	3.76	3.79	-0.31
106	38	RRF	2.92	4.00	2.00	-7.04
107	39	SSS	3.10	3.00	3.79	-1.65
108	40	Uddipan	3.10	3.76	3.79	-1.65
109	41	Swanirvar	3.10	2.57	3.00	-2.00
110	42	JCF	2.31	4.00	2.00	-4.00
111	198	ASA	4.98	5.00	4.70	-3.00
112	199	BRAC	5.00	5.00	5.00	-1.65

### 5.9 Explain why Selected Variables and Areas are Important

This part of the study covers the importance of the selected variables which are statistically justified earlier. Based on the above discussion initiatives have been taken to identify the areas and the qualitative aspects to measure performance of the MFIs. Here the issues identified and checked considering the dimensions of MC are response in disaster, internal control, interest rate, cash flow projection., over indebtness, and ethical practices which are classified as commitment to social responsibility, and considered as a major weighted (49%) group derived by FA. Program coverage, efficiency and insurance cover the commitment to the excluded people which addresses what effort the MFI has shown to serve the purpose of the client. The study found that the weight it has given for this area is 46%. Loan class, service charge, reserve policy cover the qualitative aspects which will cover the quality of the services and addresses as good governance and responsible for 11% of the total importance to justify the social aspects. No of EC meeting held this Yr.,

and Last AGM held are categorized as commitment to poverty reduction as these indicators are responsible for how much effort the top management has given to achieve the social mission of the MFI as weighted near about 6% in absolute value of the total importance and which is analyzed and selected through Factor Analysis.

<b>Table 5.11: Explanation of the Potential Variables</b>	
<b>Area/variables</b>	<b>Explanation</b>
<b>Commitment to Social Responsibility (CSR) (49%)</b>	
Response in disaster (SR1)-5%	Addresses commitment to Social Responsibility (SR) which will show the responsibility MFIs have shown in managing disaster for the clients. During disaster what steps they have taken to protect the client of the MFI. Whether they have provided emergency loan or they have taken any initiative to reschedule the payment or they have taken any initiative to provide emergency services like pure drinking water, saline, matches, candle during disaster to protect them.
Internal Control (SR2)-19%	Addresses commitment of the MFI that ensures internal control of that particular control is prevailing which will ensure the purpose of the client. For the justice internal control system has to be implemented not only from the point of management view but also from social responsibility so that the client get the service without any cheating.
Interest rate (SR3)-02%	Another important component to ensure the qualitative aspect of management. But for the justice that has to be implemented not only from the point of management view but also from social responsibility. Interest rate which is one of the major issue that criticized is in particular should be addressed properly.
Cash flow Proj. (SR4)-6%	Another important component to ensure the qualitative aspect of management. But for the delivery of the loan product to the client in time cash flow projection to be done properly so that it has to be implemented not only from the point of management view but also from social responsibility.
Over indebttness (SR5)-12%	Over indebttness issue is very important in MC to establish the qualitative aspects for the MFI. Loan should be provided to the client after proper assessment. Otherwise the possibility of over indebttness will increase which will keep the poor poorer; this is one of the major criticism against MC.
Ethical practices (SR6)-5%	No initiatives will not be effective unless the industry has an effective code of conduct which ensures the interest of the client MFI rater by establishing the ethical practice.
<b>Commitment to Serve the Excluded People (Ex)</b>	
Progm. coverage (Ex1)-20%	Addresses commitment to serve the excluded people. This is the major area to establish social aspects. The more coverage to be done, the more benefit to be possible for the client. This highest single area that has given emphasis to establish the qualitative aspects which will ensure social mission of the MFI.
Efficiency (Ex2)-2%	This is directly related with benefit of the client as well as with the sustainability of the MFI.
Insurance etc (Ex3)-1%	MC is not the all purpose tool to alleviate poverty. It has to be associated with financial services to increase protection of the client like insurance which could be ensuring the safety of the client in case of any unwanted situation.
<b>Commitment to Good Governance (GG)</b>	
Loan Class (GG1)	Portfolio Classification System entails reviewing the portfolio's aging schedules and assessing the institutions policies associated with assessing portfolio risk.
Service Charge (GG2)-2%	SC addresses whether it is utilized properly or not. There is SC policy guided by PKSF. Addresses good governance to ensure quality, transparency in establishing sustainability of the MFI through a proper guidance for the utilization of the SC. Governance focuses on how well the institutions board of directors function, including the diversity of its technical expertise, its



	independence from management, and its ability to make decisions flexibly and effectively.
Reserve policy (GG3)-6%	The only qualitative indicator for assessing capital adequacy and portfolio quality of a PO is the reserve policy which influences the performance of the MFI a lot.
<b>Commitment to Poverty Reduction (PR)</b>	
No of EC meeting held this Yr.(PR1)-8%	Addresses how efficiently can serve the purpose of the client service purpose by ensuring accountability. Though it is a management issue but this particular issue is directly related with the alleviation of poverty. It is the higher authority without in fair intention the social mission of the MFI would not be possible to achieve. It is inversely related with this variable as the problematic MFI needs more EC meeting while the sound MFI need a schedule EC meeting.
Last AGM held (PR2)-2%	Addresses how efficiently can serve the purpose of the client service purpose by ensuring accountability. Though it is a management issue but this particular issue is directly related with the alleviation of poverty. It is the higher authority without fair intention the social mission of the MFI would not be possible to achieve.

### 5.10 Conducting Linear Discriminant Analysis (LDA)

The steps involved in conducting discriminant analysis consist of formulation estimation, determination of significance, interpretation and validation as mentioned earlier.

Figure 5.4: LDA Process- qualitative aspects	Steps
Formulate the problem	Step-I
Estimate discriminant function coefficient	Step-II
Determine the significance of the determinant function	Step-III
Interpret the results	Step-IV
Assess the validity of the discriminant analysis	Step-V

### 5.11 Estimating the Discriminant Function Coefficients

After identification of the final variables of the model equation discriminant function coefficients are estimated as done earlier. The group statistics results of LDA are presented Table 5.12.

Table 5.12: Group Statistics					
PO Category		Mean	Std. Deviation	Valid N (listwise)	
				Unweighted	Weighted
Small	Commitment to SR	2.3367	.61692	104	104.000
	Commitment to Ex	1.9757	.48570	104	104.000
	Commitment to GG	3.1489	.83631	104	104.000
	Commitment to PR	3.6733	2.00459	104	104.000
Big	Commitment to SR	3.4025	1.21543	8	8.000
	Commitment to Ex	3.8462	.83356	8	8.000
	Commitment to GG	3.5088	1.11430	8	8.000
	Commitment to PR	2.6388	2.05164	8	8.000
Total	Commitment to SR	2.4129	.72273	112	112.000
	Commitment to Ex	2.1093	.70491	112	112.000
	Commitment to GG	3.1746	.85789	112	112.000
	Commitment to PR	3.5994	2.01639	112	112.000

### 5.12 Determining the Significance of Discriminant Functions

The null hypothesis that the means of the discriminant functions in all groups are equal can be statistically tested. In SPSS, this test is based on Wilk's Lambda. If several functions are tested simultaneously, the Wilk's Lambda is the product of the univariate Lambda for each function. The significance level is estimated based on a chi-square transformation of the statistic. In testing for significance in the case here (Table 5.13b) it may be noted that the Wilk's Lambda associated with the function is 0.491, which transforms to chi-square of 76.889 with 5 degrees of freedom. This is significant beyond 0.05 level.

Table 5.13(a): Eigen values

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	1.038 <sup>a</sup>	100.0	100.0	.714

a. First 1 canonical discriminant functions were used in the analysis.

Table 5.13 (b): Wilks' Lambda

Test of Function (s)	Wilks' Lambda	Chi-square	Df	Sig.
1	.491	76.889	4	.000

### 5.13 Derivation of Model for Qualitative Aspects

After screening by avoiding duplication and conducting Factor Analysis the following 14 variables are considered significant. Considering the qualitative aspects do matter in rating MFIs and volatile nature and dimensions of microcredit, the following linear equation and constant are the major outputs of LDA which can measure the strength and performance of the individual MFI and discriminate the MFI by category as well as by within category.

Other than the six principles of the client protection campaign like avoidance of over-indebtedness; transparent pricing; appropriate collections practices; ethical staff behavior; mechanisms for redress of grievances, and privacy of client data, the different business models like Hermes' Approach and ISO 26000 as well as the corporate social principles (Appendix VIII) have been used to derive the major areas and variables. Commitment to GG, Commitment to serve the Ex, Commitment to SR and Commitment to SP are the major areas which do matter for qualitative aspects for the MFI; Standards for the industry and for the category and cut off point may be identified from the equation model:

**Table 5.14 a: Canonical Discriminant Function Coefficients**

	Function
	1
Commitment to SR	-.106
Commitment to Ex	2.142
Commitment to GG	-.334
Commitment to PR	-.142
(Constant)	-2.689

Unstandardized coefficients

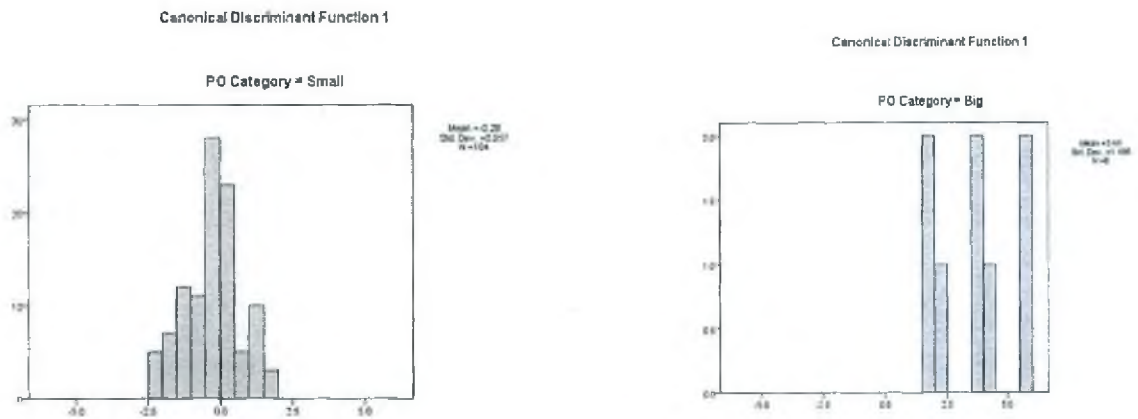
**Table 5.14 b: Classification Function Coefficients**

	PO Category	
	Small	Big
Commitment to SR	1.117	.701
Commitment to Ex	4.341	12.739
Commitment to GG	3.093	1.781
Commitment to PR	.948	.391
(Constant)	-12.897	-30.025

Fisher's linear discriminant functions

Table 5.15: Model Equation					
	Const	CSR	CEx	CGG	CPR
Overall	2.689	-0.106	2.142	-0.334	-0.142
OOSA	12.897	1.117	4.341	3.093	1.781
BIPOOL	30.025	0.701	12.739	1.781	-0.391

**Figure 5.5: Graphical Presentation of group by category**



**Figure 5.6: Graphical Presentations of the Model Equation**

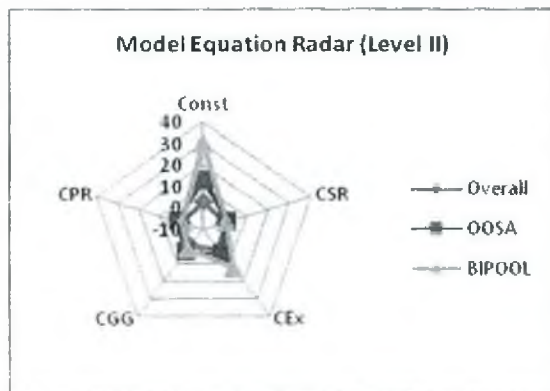


Fig. 5.6: Radar view of the Model Equation (a)

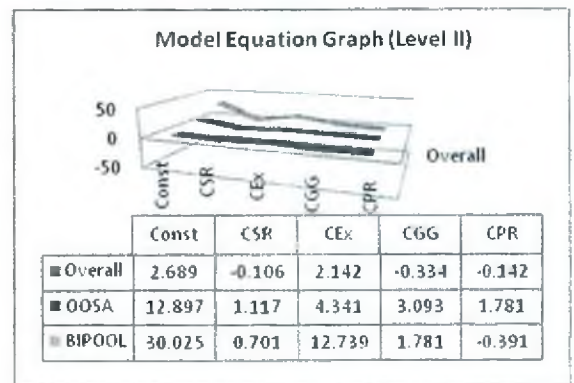


Fig. 5.6: 3 D Line view of the Model Equation (b)

Finally, the MFIs can be graded according to the score and discriminate from and within

category. Other than the score, LDA classifies and cross validates the category in table 5.17 which is another major output of the LDA.

**Table 5.16: LDA Score (level-II)**

Case Number	Actual Group	Predicted Group	Highest Group				Second Highest Group			Discriminant Scores
			P(D>d   G=g)		P(G=g   D=d)	Squared Mahalanobis Distance to Centroid	Group	P(G=g   D=d)	Squared Mahalanobis Distance to Centroid	
			p	df						Function 1
1	1	1	.902	1	1.000	.015	2	.000	16.350	-.403
2	1	1	.601	1	1.000	.273	2	.000	19.740	-.803
3	1	1	.634	1	.997	.227	2	.003	11.862	.196
-	-	-	----	-	----	----	-	----	-----	----
-	-	-	----	-	----	----	-	----	-----	----
110	2	2	.443	1	1.000	.589	1	.000	21.977	4.408
111	2	2	.062	1	1.000	3.489	1	.000	33.505	5.508
112	2	2	.052	1	1.000	3.783	1	.000	34.402	5.585
1	1	1	.750	4	1.000	1.921	2	.000	18.089	
2	1	1	.184	4	1.000	6.217	2	.000	25.658	
3	1	1	.441	4	.997	3.752	2	.003	15.117	
-	-	-	----	-	----	----	-	----	-----	
-	-	-	----	-	----	----	-	----	-----	
110	2	2	.061	4	1.000	9.021	1	.000	28.632	
111	2	2	.067	4	1.000	8.769	1	.000	38.069	
112	2	2	.037	4	1.000	10.214	1	.000	40.047	

**Table 5.17: Classification Results<sup>b,c</sup>**

	PO Category	Predicted Group Membership		Total	
		Small	Big		
Original	Count	Small	103	1	104
		Big	0	8	8
	%	Small	99.0	1.0	100.0
		Big	.0	100.0	100.0
Cross-validated <sup>a</sup>	Count	Small	102	2	104
		Big	0	8	8
	%	Small	98.1	1.9	100.0
		Big	.0	100.0	100.0

a. Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.

b. 99.1% of original grouped cases correctly classified.

c. 98.2% of cross-validated grouped cases correctly classified.

## CHAPTER SIX

### JUSTIFICATION OF RESULTS AND INTERPRETATION

Justification of the two models for qualitative and quantitative aspects and justification of the hypothesis determined during the stage of exploration of issues and challenges are performed. On way of justifying the two models the statistical significance relevant for the statistical tools is like LDA is used for the development of the model. And in the case of justifying the selection of the preliminary variables, the other required tool like Factor analysis is used. Considering the aspects do matter in rating MFIs and volatile nature and dimensions of microcredit, the following linear equations and constants, which are derived from the overall data (Appendix X) are the major outputs of LDA which can measure the strength and performance of the individual MFI and discriminate the MFI by category as well as by within category.

#### 6.1 Justification of the Quantitative (Level-I) Model

##### **Determine the significance**

As this research is conducted to justify the categories are significantly different so that we will have the scope to develop the model for the individual category. It would be meaningful to interpret the model if the functions estimated for the model is statistically significant. The null hypothesis, in the population, the means of all discriminant functions in all groups are equal, can be statistically tested. Here, it is based on wilks'  $\lambda$ . If the several functions are tested simultaneously, the wilks'  $\lambda$  statistic is the product of univariate  $\lambda$  for each function. The significance level is estimated based on a chi-square transformation of the statistic. In testing for significance in the study, it may be noted that the wilks'  $\lambda$  associated with the function is 0.307 which is transformed to a chi-square of 126.906 with 5 degrees of freedom. This is significant beyond the 0.05 level. This indicates that the null hypothesis is rejected.

The Eigen value associated with this function is 2.256 and it accounts for 100% of the explained variance. The canonical correlation associated with this function is 0.832. The square of this correlation is  $(0.832)^2 = 0.692$  which indicates that 69 percent of the variance in the dependent variable is explained or accounted for by this model.

**Table 6.1: Eigen values**

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	2.256 <sup>a</sup>	100.0	100.0	.832

a. First 1 canonical discriminant functions were used in the analysis.

**Table 6.2: Wilks' Lambda**

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.307	126.906	5	.000

### Interpretation of the Results

The value of the coefficients for the particular predictor depends on the other predictors included in the discriminant functions. The signs of the coefficients are arbitrary, but they indicate which variable values result in large and small function values and associate them with particular group. We can obtain the idea of the relative importance of the variables by examining the absolute magnitude of the standardized discriminant function coefficients. In general, predictors with relatively large standardized coefficients contribute more to the discriminating power of the function, as compared with predictors with smaller coefficients and are therefore more important which indicate management component of the function is contributing the highest in discriminating the category which followed by Asset Quality, Capital Adequacy, Earnings and Liquidity respectively.

**Table 6.3: Structure Matrix**

	Function
	1
Management	.894
Asset Quality	-.092
Capital Adequacy	-.028
Earnings	-.013
Liquidity	-.004

Pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions.

Variables ordered by absolute size of correlation within function.

Idea of the relative importance of the predictors can also be obtained by examining the structure correlation, also called canonical loadings. This simple correlation between each predictor and the discriminant function represents the variance that the predictor shares with the function. The greater the magnitude of a structure correlation, the more important the corresponding predictor which indicates the same finding of importance of management in our study. The unstandardized discriminant function coefficients are also found which will be applied to the raw values of the variables in the validity sample for classification purposes.

	Function
	1
Capital Adequacy	.010
Asset Quality	-.440
Management	19.512
Earnings	-.528
Liquidity	.084
(Constant)	-.945

Unstandardized coefficients

The group centroids, giving the value of the discriminant function evaluated at the group means, are presented in Table 6.5 For group centroids -0.413 for small and 5.367 for big category which is opposite in sign. The signs of the coefficients associated with all the predictors are positive. This suggests that MFI with higher management capacity, better asset quality and capital adequacy, and higher income capacity and liquidity is supposed to be categorized as a big MFI. At the same time, Table 6.6 explains the classification results and justifies the classification by cross validation results of the discrimination.

PO Category	Function
	1
Small	-.413
Big	5.367

Unstandardized canonical discriminant functions evaluated at group means

	PO Category	Predicted Group Membership		Total	
		Small	Big		
Original	Count	Small	104	0	104
		Big	0	8	8
	%	Small	100.0	.0	100.0
		Big	.0	100.0	100.0
Cross-validated <sup>a</sup>	Count	Small	104	0	104
		Big	0	8	8
	%	Small	100.0	.0	100.0
		Big	.0	100.0	100.0

a. Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.

b. 100.0% of original grouped cases correctly classified.

c. 100.0% of cross-validated grouped cases correctly classified.

## 6.2 Justification of the Qualitative (Level-II) Model

### Determine the Significance

The null hypothesis, in the population the means of all discriminant functions in all groups are equal, can be statistically tested. In our findings it is based on Wilks'  $\Lambda$ . If the several functions are tested simultaneously, the Wilks'  $\Lambda$  statistic is the product of univariate  $\Lambda$  for each function. The significance level is estimated based on a chi-square transformation of the statistic. In testing for significance in the study, it may be noted that the Wilks'  $\Lambda$  associated with the function is 0.491, which is transformed to a chi-square of 76.889 with 4 degrees of freedom. This is significant beyond the 0.05 level. This indicates that the null hypothesis is rejected.

**Table 6.7: Eigenvalues**

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	1.038 <sup>a</sup>	100.0	100.0	.714

a. First 1 canonical discriminant functions were used in the analysis.

**Table 6.8: Wilks' Lambda**

Test of Function(s)	Wilks' Lambda	Chi-square	Df	Sig.
1	.491	76.889	4	.000

The Eigen value associated with this function is 1.038 and it accounts for 100% of the explained variance. The canonical correlation associated with this function is 0.714.

### Interpretation of the Results

The value of the coefficients for the particular predictor depends on the other predictors included in the discriminant functions. The signs of the coefficients are arbitrary, but they indicate which variable values result in large and small function values and associate them with particular group.

We can obtain the idea of the relative importance of the variables by examining the absolute magnitude of the standardized discriminant function coefficients. In general, predictors with relatively large standardized coefficients contribute more to the discriminating power of the function, as compared with predictors with smaller coefficients and are therefore more important, which indicate Commitment to SR component of the function is contributing the highest in discriminating the category which followed by Commitment to Ex, Commitment to GG, and Commitment to PR respectively.



Idea of the relative importance of the predictors can also be obtained by examining the structure correlation, also called canonical loadings. This simple correlation between each predictor and the discriminant function represents the variance that the predictor shares with the function. The greater the magnitude of a structure correlation, the more important the corresponding predictor which indicates the same finding of importance of Commitment to SR in our study.

Commitment area	Function 1
Commitment to SR	1.573
Commitment to Ex	.785
Commitment to GG	-.693
Commitment to PR	.134
(Constant)	-2.795

Unstandardized coefficients

	Wilks' Lambda	F	df1	df2	Sig.
Commitment to GG	.806	26.512	1	110	.000
Commitment to Ex	.648	59.801	1	110	.000
Commitment to SR	.633	63.665	1	110	.000
Commitment to PR	.688	49.819	1	110	.000

		PO Category	Predicted Group Membership		Total
			Small	Big	
Original	Count	Small	104	0	104
		Big	0	8	8
	%	Small	100.0	.0	100.0
		Big	.0	100.0	100.0
Cross-validated <sup>a</sup>	Count	Small	104	0	104
		Big	0	8	8
	%	Small	100.0	.0	100.0
		Big	.0	100.0	100.0

a. Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.

b. 100.0% of original grouped cases correctly classified.

c. 100.0% of cross-validated grouped cases correctly classified.

### 6.3 Assess Validity of the Model

In LDA, SPSS offer a leave-one-out cross-validation option. In this option, the discriminant model is re-estimated as many times as there are respondents in the sample. Each re-

estimated model leaves out one respondent and the model is used to predict that respondent gives a sense to assess the validity of the model without having the test with hold out sample. However, the discriminant weights, estimated by the analysis sample, are multiplied by the values of the predictor variables in the holdout sample to generate discriminant scores for the cases in the hand out sample. The cases are then assigned to category based on their discriminant scores and appropriate decision rule. In this case, the MFI will be categorized to that whose centroid is the closest. The hit ratio, or the percentage of MFIs correctly classified, can then be determined by summing the diagonal elements and dividing by the total number of MFIs.

As there are two categories, the percentage of chance classification is 50%. There is no general guideline available that what percentage of correctly classified should be a credible model, but it may be suggested that classification accuracy achieved by LDA should be at least 25% greater than the obtained by chance. (Joseph and William 1998, Glen 2001).

**Table:6.12: Test of validity- Level-I**

Cross-validated <sup>a</sup> Case Number	Actual Group	Highest Group					Second Highest Group			
		Predicted Group	P(D>d   G=g)		P(G=g   D=d)	Squared Mahalanobis Distance to Centroid	Group	P(G=g   D=d)	Squared Mahalanobis Distance to Centroid	
			p	df						
1	1	1	.377	5	.992	5.332	2	.008	14.965	
2	1	1	.406	5	.994	5.086	2	.006	15.166	
3	1	1	.014	5	1.000	14.350	2	.000	45.794	
4	1	1	.000	5	.978	380.441	2	.022	387.994	
5	1	1	.884	5	1.000	1.742	2	.000	40.597	
6	1	1	.981	5	1.000	.740	2	.000	37.943	
7	1	1	.410	5	1.000	5.050	2	.000	53.309	
8	1	1	.983	5	1.000	.704	2	.000	27.775	
...	..	..	.....	..	.....	.....	..	.....	.....	
...	..	..	.....	..	.....	.....	..	.....	.....	
110	2	2	.890	5	1.000	1.691	1	.000	23.268	
111	2	2	.003	5	1.000	17.780	1	.000	86.329	
112	2	2	.022	5	1.000	13.172	1	.000	74.707	

With the classification of the original group to the predicted group, LDA also performs cross validation. In cross validation, each case is classified by the functions derived from all cases other than that case. In this study there are no misclassified cases which indicate that the model will also validate for the real data also for both quantitative and qualitative aspects. These are given in Tables 6.12 and 6.13.

Cross-validated <sup>a</sup> Case Number	Actual Group	Highest Group					Second Highest Group			
		Predicted Group	P(D>d   G=g)		P(G=g   D=d)	Squared Mahalanobis Distance to Centroid	Group	P(G=g   D=d)	Squared Mahalanobis Distance to Centroid	
			p	df						
1	1	1	.694	4	.998	2.230	2	.002	15.230	
2	1	1	.548	4	.982	3.059	2	.018	11.068	
3	1	1	.674	4	.989	2.336	2	.011	11.419	
4	1	1	.674	4	.989	2.336	2	.011	11.419	
5	1	1	.674	4	.989	2.336	2	.011	11.419	
6	1	1	.366	4	.961	4.303	2	.039	10.717	
7	1	1	.127	4	1.000	7.176	2	.000	38.826	
....	..	..	....	..	.....	.....	..	.....	.....	
....	...	....	....	..	.....	.....	...	....	.....	
110	2	2	.659	4	.973	2.420	1	.027	9.569	
111	2	2	.000	4	1.000	25.042	1	.000	48.926	
112	2	2	.532	4	1.000	3.159	1	.000	22.489	

#### 6.4 Justification of the Hypotheses

A test of significance is a procedure by which sample results are used to verify the truth or falsity of a null hypothesis. The key idea behind the test of significance is that of a test of statistic (estimator) and the sampling distribution of such a statistic under the null hypothesis. The decision to accept or reject  $H_0$  is made on the basis of the value of the test statistic obtained from the data. Rejection of the null hypothesis will establish the alternate hypothesis which may justify the proposed model.

$H^0_1$ : The mean of the identified variables for the categories will be same for both quantitative and qualitative aspects.

$H^a_1$ : The mean of the identified variables for the categories will not be same for both quantitative and qualitative aspects.

It would not be meaningful to interpret the analysis if the discriminant functions estimated were not statistically significant. The null hypothesis that, in the population, the means of all discriminant functions in all groups are equal can be statistically tested. In our findings it is based on wilks'  $\lambda$ . If the several functions are tested simultaneously, the wilks'  $\lambda$  statistic is the product of univariate  $\lambda$  for each function. The significance level is estimated based on a chi-square transformation of the statistic. In testing for significance in the study it may be noted that the wilks'  $\lambda$  associated with the function is .307, which is transformed to a chi-square of 126.906 with 5 degrees of freedom. This is significant beyond the 0.05 level. This indicates that the null hypothesis is rejected.

Function	Eigen value	% of Variance	Cumulative %	Canonical Correlation
1	2.256 <sup>a</sup>	100.0	100.0	.832

a. First 1 canonical discriminant functions were used in the analysis.

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.307	126.906	5	.000

Again, in testing for significance for qualitative aspects, it may be noted that the wilks'  $\lambda$  associated with the function is .491, which is transformed to a chi-square of 76.889 with 4 degrees of freedom. This is significant beyond the 0.05 level. This indicates that the null hypothesis is rejected.

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	1.038 <sup>a</sup>	100.0	100.0	.714

a. First 1 canonical discriminant functions were used in the analysis.

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.491	76.889	4	.000

Moreover, from the table which is derived from the sample of quantitative aspects and qualitative aspects we see the means for OOSA and BIPOOL categories are given in table 6.1 and 6.3, whereas the test of equality of the category for the qualitative and quantitative aspects are given in Tables 6.2 and 6.4 which indicates the significance of the difference of the means of two category and in turn rejected the null hypothesis. This indicates that the means of the identified variables for the categories will not be same for both quantitative and qualitative aspects.

H<sup>0</sup><sub>2</sub>: This is not possible to reduce and group the potential variables for both qualitative and quantitative aspects.

H<sup>a</sup><sub>2</sub>: This is possible to reduce and group the potential variables for both quantitative and qualitative aspects.

The study conducted factor analysis and reduced the potential variables for both quantitative and qualitative aspects. At the same time, the analysis identified the five areas for the quantitative aspects and four areas for qualitative aspects which are statistically significant. Tables 6.18 to 22 are given to justify the alternate hypothesis.

The study uses the most commonly used method for rotation, the varimax procedure. This is an orthogonal method for rotation that minimizes the number of variables with high loadings on a factor, thereby enhancing the interpretability of the factors. The study found 5 variables correlated with factor 1, 4 variables with factor 2, 2 variables with in factors 3, 4 and 5. The other variables are eliminated as they are not highly related which justify to reject the null hypothesis.

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.809	26.718	26.718	4.809	26.718	26.718	4.447	24.705	24.705
2	2.994	16.633	43.351	2.994	16.633	43.351	2.970	16.497	41.203
3	1.981	11.007	54.358	1.981	11.007	54.358	2.025	11.248	52.451
4	1.818	10.101	64.459	1.818	10.101	64.459	1.726	9.587	62.038
5	1.214	6.747	71.206	1.214	6.747	71.206	1.650	9.168	71.206
.....	.....	.....	.....						
17	.028	.155	100.000						
18	3.144E-16	1.746E-15	100.000						

Extraction Method: Principal Component Analysis.

	Component				
	1	2	3	4	5
Op. Cost to APA	.926	-.076	.023	-.027	-.014
Savings Rate	.926	-.076	.023	-.027	-.014
Income to APA	.802	.290	.040	-.148	-.068
Capital to TA	.777	-.065	.118	-.058	.133
Return on Equity	.700	-.091	.109	-.042	.054
Productivity of other CA	.516	-.104	-.197	.089	.419
Cost Per Tk. Lent	.062	.904	.060	-.157	-.075
Portfolio at Risk	-.090	.871	.040	-.166	.038
Debt Service Cover Ratio	-.106	.862	-.012	.172	-.012
Op. Self Service	-.014	.711	-.012	.459	-.146
Return on Asset	.068	.115	.901	.036	.003
Cap to Total Asset Without FA	.043	-.028	.874	-.002	-.006
Current Ratio	-.008	.041	.072	.817	-.140
On Demand Realization	.146	.038	.029	-.806	-.246
Debt Equity Ratio	-.182	-.026	.010	-.084	.673
Reserve Rate	.517	-.026	-.324	.106	.592
Delinquency Rate	.518	-.072	.369	.237	.589
Loan Loss Provision Rate	.335	-.050	.359	.056	.436

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 6 iterations.

In case of qualitative aspects the study found 6 variables are correlated with factor 1, 3 variables with factor 2 and 3, 2 variables for 4. The other variables are eliminated as they are not highly related which justify to reject the null hypothesis.

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.065	41.561	41.561	7.065	41.561	41.561	4.152	24.423	24.423
2	1.654	9.731	51.292	1.654	9.731	51.292	2.889	16.996	41.419
3	1.373	8.076	59.367	1.373	8.076	59.367	2.744	16.142	57.560
4	1.074	6.320	65.687	1.074	6.320	65.687	1.382	8.127	65.687
.....	.....	.....	.....						
16	.193	1.138	99.222						
17	.132	.778	100.000						

Extraction Method: Principal Component Analysis.

	Component			
	1	2	3	4
Response in disaster (Ex2)	.776	.223	.052	-.009
Internal Control (GG6)	.723	.218	.093	-.147
Interest Rate (Ex3)	.716	.325	.084	.024
Cash flow Proj. (GG5)	.693	.198	.393	.020
Over indebttness (SR2)	.662	.315	.213	.138
Ethical practices (SR1)	.631	.236	.350	.250
Business plan (GG4)	.598	.306	.257	.331
Good Govt practices (SR3)	.532	.449	.294	-.050
Progm. coverage (Ex1)	.303	.793	.217	-.009
Efficiency (Ex2)	.257	.786	.161	-.087
Insurance (Ex3))	.267	.768	.190	-.022
Yr of Services.	.279	.498	.009	.198
Loan class. (GG2)	.163	.057	.866	.017
Service charge (GG1)	.124	.260	.847	.057
Reserve (GG3)	.267	.171	.811	.000
No of EC meeting this Yr.(PR1)	-.221	.064	.113	.816
Last AGM held (PR2)	.299	-.080	-.073	.670

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.854
Bartlett's Test of Sphericity	Approx. Chi-Square	1.007E3
	df	136
	Sig.	.000

H<sup>0</sup><sub>3</sub>: The cutoff points derived for the category will not separate the category for both quantitative and qualitative aspects.

H<sub>3</sub>: The cutoff point derived for the category will separate the category for both quantitative and qualitative aspects.

Table 6.23: Classification Function Coefficients

	PO Category	
	Small	Big
Capital Adequacy	.225	.282
Asset Quality	20.421	17.877
Management	20.081	132.858
Earnings	-.223	-3.276
Liquidity	.011	.496
(Constant)	-13.425	-33.203

Fisher's linear discriminant functions

Table 6.24 Canonical Discriminant Fun Coefficient (Level-I)

	Function
	I
Capital Adequacy	.010
Asset Quality	-.440
Management	19.512
Earnings	-.528
Liquidity	.084
(Constant)	-.945

Unstandardized coefficients

One of the major features of the study is the cutoff point derived from the LDA which can classify the category. The study found that the cutoff points for the category small and big as well as for the overall are 13.425, 33.203 and 0.945 respectively for the quantitative aspects and 12.897, 30.02 and 2.689 for the qualitative aspects. This is to justify to reject the null hypothesis that the cutoff points derived for the category will not separate the category for both quantitative and qualitative aspects.

Table 6.25: Classification Function Coefficients

	PO Category	
	Small	Big
Commitment to GG	1.117	.701
Commitment to Ex	4.341	12.739
Commitment to SR	3.093	1.781
Commitment to PR	.948	.391
(Constant)	-12.897	-30.025

Fisher's linear discriminant functions

Table 6.26: Canonical Discriminant Function Coefficient (Level-II)

	Function
	I
Commitment to SR	-.106
Commitment to Ex	2.142
Commitment to GG	-.334
Commitment to PR	-.142
(Constant)	-2.689

Unstandardized coefficients

H<sup>0</sup><sub>4</sub>: The model developed for quantitative aspects will not be representative.

H<sub>4</sub>: The model developed for quantitative aspects will be representative.

Another feature of the study is the model equations derived from the LDA for the quantitative aspects which are categorized for the overall as well as for the grouped category. In this study, three equations for the three categories for the quantitative aspects which are representative for the category are found. These three equations are given in Table 6.27.

Category	Const	CA	AQ	Mgt	Earnings	Liquidity
Overall	-0.945	0.010	-0.440	19.512	-0.528	0.84
Big	-33.203	0.282	17.877	132.858	-3.276	0.496
Small	-13.425	0.225	20.421	20.081	-0.223	0.011

H<sup>0</sup>5 : The model developed for qualitative aspects will not be representative.

H<sup>a</sup>5 : The model developed for qualitative aspects will be representative.

In the same way, another features of the study is the model equations derived from the LDA for the qualitative aspects which are categorized for the overall and as well as for the grouped category. In this study, three equations for the three categories for the quantitative aspects which are representative for the category are also found. These three equations are given in Table 6.28.

	Const	CSR	CE <sub>x</sub>	CGG	CPR
Overall	2.689	-0.106	2.142	-0.334	-0.142
OOSA	12.897	1.117	4.341	3.093	1.781
BIPOOL	30.025	0.701	12.739	1.781	-0.391

H<sup>0</sup>6 : The grading system developed from the model will not be capable to grade the MFIs for both quantitative and qualitative aspects.

H<sup>a</sup>6: The grading system developed from the model will be capable to grade the MFIs for both quantitative and qualitative aspects.

In the same way, another feature of the study is the score derived from the LDA for the qualitative aspects which is given on the basis of financial performance. In this study, scores of the 112 POs for the performance of quantitative aspects are given in Table 6.29.



**Table 6.29: Discriminant Scores- Level-I**

Original Case Number	Actual Group	Highest Group					Second Highest Group			Discriminant Scores
		Predicted Group	P(D>d   G=g)		P(G=g   D=d)	Squared Mahalanobis Distance to Centroid	Group	P(G=g   D=d)	Squared Mahalanobis Distance to Centroid	Function I
			p	df						
1	1	1	.987	1	.999	.000	2	.001	13.161	-.274
2	1	1	.504	1	.984	.445	2	.016	8.666	.409
3	1	1	.600	1	.990	.274	2	.010	9.533	.266
4	1	1	.600	1	.990	.274	2	.010	9.533	.266
5	1	1	.600	1	.990	.274	2	.010	9.533	.266
6	1	1	.381	1	.966	.769	2	.034	7.477	.619
7	1	1	.017	1	1.000	5.667	2	.000	35.902	-2.638
.....	...	...	.....	..	.....	.....	..	.....	.....	.....
.....	...	...	.....	...	.....	.....	...	.....	.....	.....
110	2	2	.469	1	.980	.523	1	.020	8.339	2.630
111	2	2	.059	1	1.000	3.576	1	.000	30.275	5.244
112	2	2	.339	1	1.000	.915	1	.000	20.867	4.310

Another feature of the study is the score derived from the LDA for the qualitative aspects which is given on the basis of social performance. In this study, scores of the 112 POs for the performance of qualitative aspects are given in the Table 6.30.

**Table 6.30: Discriminant Scores-Level-II**

Original Case Number	Actual Group	Highest Group					Second Highest Group			Discriminant Scores
		Predicted Group	P(D>d   G=g)		P(G=g   D=d)	Squared Mahalanobis Distance to Centroid	Group	P(G=g   D=d)	Squared Mahalanobis Distance to Centroid	Function I
			p	df						
1	1	1	.040	1	.992	4.236	2	.008	13.851	1.645
2	1	1	.043	1	.993	4.086	2	.007	14.126	1.609
3	1	1	.915	1	1.000	.011	2	.000	32.179	-.306
4	1	1	.718	1	1.000	.131	2	.000	29.361	-.052
5	1	1	.624	1	1.000	.241	2	.000	39.321	-.904
6	1	1	.724	1	1.000	.125	2	.000	37.618	-.766
7	1	1	.218	1	1.000	1.520	2	.000	49.178	-1.646
.....	..	..	.....	...	.....	.....	..	.....	.....	.....
.....	....	....	.....	.....	.....	.....	...	.....	.....	.....
110	2	2	.323	1	1.000	.976	1	.000	22.963	4.379
111	2	2	.005	1	1.000	7.796	1	.000	73.481	8.159
112	2	2	.020	1	1.000	5.411	1	.000	65.706	7.693

H<sup>0</sup><sub>7</sub>: MFIs to trade off between financial and social aspects.

H<sup>a</sup><sub>7</sub>: MFIs do not need to trade off between financial and social aspects.

One of the major objectives of the study is that whether the financial performance has to

trade off for the social performance. The study found that the financial performance has the positive and strong relations with all the components of the qualitative aspects, which indicate a very significant output of the study and similar with the findings of social returns and cost (Todaro and Smith 2008). Though there are some weak relations with the components of the qualitative aspects but relations of the major components of qualitative aspects with the financial aspects are positive and strong which is in Table 6.30. On the other hand, every component of the outreach as well as the overall performance between the qualitative and quantitative aspects is also positive, which is shown in Table 6.31.

Table:6.31 Correlation between Level-I and Level-II						
		FS	GG	Ex	SR	PR
FS	Pearson Correlation	1	.772**	.530**	.627**	.735**
	Sig. (2-tailed)		.000	.000	.000	.000
	Sum of Squares and Cross-products	268.928	80.481	52.090	59.811	86.848
	Covariance	2.467	.738	.478	.549	.797
	N	112	112	112	112	112
GG	Pearson Correlation	.772**	1	.602**	.752**	.734**
	Sig. (2-tailed)	.000		.000	.000	.000
	Sum of Squares and Cross-products	80.481	40.439	22.954	27.822	33.624
	Covariance	.738	.371	.211	.255	.308
	N	112	112	112	112	112
Ex	Pearson Correlation	.530**	.602**	1	.797**	.399**
	Sig. (2-tailed)	.000	.000		.000	.000
	Sum of Squares and Cross-products	52.090	22.954	35.980	27.806	17.247
	Covariance	.478	.211	.330	.255	.158
	N	112	112	112	112	112
SR	Pearson Correlation	.627**	.752**	.797**	1	.511**
	Sig. (2-tailed)	.000	.000	.000		.000
	Sum of Squares and Cross-products	59.811	27.822	27.806	33.836	21.390
	Covariance	.549	.255	.255	.310	.196
	N	112	112	112	112	112
SP	Pearson Correlation	.735**	.734**	.399**	.511**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	Sum of Squares and Cross-products	86.848	33.624	17.247	21.390	51.881
	Covariance	.797	.308	.158	.196	.476
	N	112	112	112	112	112

\*\* . Correlation is significant at the 0.01 level (2-tailed).

H<sup>0</sup><sub>8</sub>: There is no positive correlation between the performance of quantitative and qualitative aspects.

H<sub>8</sub>: There is positive correlation between the performance of quantitative and qualitative aspects

The study found that the financial performance has the positive and strong relations with all the components of the qualitative aspects which indicate a very significant output of the study. Though there are some weak relations with the components of the qualitative aspects but relations of the major components of qualitative aspects with the financial aspects are positive and strong which is shown in Table 6.32.

		Discriminant Scores from L-I	Amt.of Loan Outstanding-PKSF	No. of borrowers-F-P	Discriminant Scores from L-II
Discriminant Scores from L-I	Pearson Correlation	1	.591**	.482**	.810**
	Sig. (2-tailed)		.000	.000	.000
	Sum of Squares and Cross-products	162.169	4.558E10	9381998.679	101.594
	Covariance	1.461	4.144E8	85290.897	.915
	N	112	111	111	112
Amt.of Loan Outstanding-PKSF	Pearson Correlation	.591**	1	.920**	.627**
	Sig. (2-tailed)	.000		.000	.000
	Sum of Squares and Cross-products	4.558E10	3.669E19	8.517E15	5.080E10
	Covariance	4.144E8	3.336E17	7.743E13	4.618E8
	N	111	111	111	111
No. of borrowers-F-P	Pearson Correlation	.482**	.920**	1	.533**
	Sig. (2-tailed)	.000	.000		.000
	Sum of Squares and Cross-products	9381998.679	8.517E15	2.338E12	1.091E7
	Covariance	85290.897	7.743E13	2.126E10	99159.689
	N	111	111	111	111
Discriminant Scores from L-II	Pearson Correlation	.810**	.627**	.533**	1
	Sig. (2-tailed)	.000	.000	.000	
	Sum of Squares and Cross-products	101.594	5.080E10	1.091E7	206.880
	Covariance	.915	4.618E8	99159.689	1.864
	N	112	111	111	112

\*\* Correlation is significant at the 0.01 level (2-tailed).

Table 6.33: Correlation: Level-I and Level-II ranking (a)			
	Discriminant Scores from L-I	Discriminant Scores from L-II	
Discriminant Scores from Function 1 for Analysis 1	Pearson Correlation	1	.810**
	Sig. (2-tailed)	.	.000
	Sum of Squares and Cross-products	268.928	165.429
	Covariance	2.467	1.518
	N	112	112
Discriminant Scores from Function 1 for Analysis 1	Pearson Correlation	.810**	1
	Sig. (2-tailed)	.000	
	Sum of Squares and Cross-products	165.423	155.176
	Covariance	.915	1.864
	N	112	112

\*\* . Correlation is significant at the 0.01 level (2-tailed).

On the other hand, the every component of the outreach as well as the overall performance between the qualitative and quantitative aspects is also positive, which is shown in Table 6.33 .

Table:6.34 Correlation: Level-I and Level-II (b)			
	Discriminant Scores from L-I	Discriminant Scores from L-II	
Spearman's rho	Discriminant Scores Correlation from Function 1 for Analysis 1 Coefficient	1.000	.624**
	Sig. (2-tailed)	.	.000
	N	112	112
Discriminant Scores from Function 1 for Analysis 1	Discriminant Scores Correlation from Function 1 for Analysis 1 Coefficient	.624**	1.000
	Sig. (2-tailed)	.000	.
	N	112	112

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Moreover it (category) could be compared with the performance for MFIs with respect to the quantitative and qualitative aspects which can be justified by the following analysis. The correlations between the variables of financial aspects which are the components of CAMEL like Capital Adequacy, Asset Quality, Management, Earnings and Liquidity and components of Social aspects like Com to GG, Com to Ex, Com to SR and Com to PR are positively related which is reflected in Table 6.35.

Table 6.35: Correlation: Level-I and Level-II (c)

		CA	AQ	Mgt	Ern	Lqdy	Com to GG	Com to Ex	Com to SR	Com to SP
CA	Pearson Correlation	1	-.068	-.094	-.038	-.043	-.041	.044	-.083	.109
	Sig. (2-tailed)		.477	.323	.694	.654	.665	.648	.382	.251
	Sum of Sq and CP	4956.211	-11.985	-6.583	-25.420	-82.973	-20.938	20.854	-41.417	59.985
	Covariance	44.651	-.108	-.059	-.229	-.748	-.189	.188	-.373	.540
	N	112	112	112	112	112	112	112	112	112
AQ	Pearson Correlation	-.068	1	-.103	.023	.072	-.067	-.142	-.168	-.219*
	Sig. (2-tailed)	.477		.278	.809	.451	.483	.134	.077	.020
	Sum of Sq and CP	-11.985	6.277	-.257	.554	4.955	-1.206	-2.426	-2.965	-4.272
	Covariance	-.108	.057	-.002	.005	.045	-.011	-.022	-.027	-.038
	N	112	112	112	112	112	112	112	112	112
Mgt	Pearson Correlation	-.094	-.103	1	.210*	-.054	.472**	.678**	.648**	.717**
	Sig. (2-tailed)	.323	.278		.026	.570	.000	.000	.000	.000
	Sum of Sq and CP	-6.583	-.257	.986	2.002	-1.481	3.376	4.578	4.538	5.548
	Covariance	-.059	-.002	.009	.018	-.013	.030	.041	.041	.050
	N	112	112	112	112	112	112	112	112	112
Ern	Pearson Correlation	-.038	.023	.210*	1	.255**	-.099	-.106	-.081	.039
	Sig. (2-tailed)	.694	.809	.026		.007	.301	.265	.398	.682
	Sum of Sq and CP	-25.420	.554	2.002	92.046	67.403	-6.803	-6.931	-5.457	2.923
	Covariance	-.229	.005	.018	.829	.607	-.061	-.062	-.049	.026
	N	112	112	112	112	112	112	112	112	112
Lqdy	Pearson Correlation	-.043	.072	-.054	.255**	1	.213*	-.047	.125	-.049
	Sig. (2-tailed)	.654	.451	.570	.007		.024	.624	.191	.609
	Sum of Sq and CP	-82.973	4.955	-1.481	67.403	756.174	42.079	-8.753	24.162	-10.471
	Covariance	-.748	.045	-.013	.607	6.812	.379	-.079	.218	-.094
	N	112	112	112	112	112	112	112	112	112
Com to GG	Pearson Correlation	-.041	-.067	.472**	-.099	.213*	1	.462**	.683**	.357**
	Sig. (2-tailed)	.665	.483	.000	.301	.024		.000	.000	.000
	Sum of Sq and CP	-20.938	-1.206	3.376	-6.803	42.079	51.777	22.625	34.652	20.036
	Covariance	-.189	-.011	.030	-.061	.379	.466	.204	.312	.181
	N	112	112	112	112	112	112	112	112	112
Com to Ex	Pearson Correlation	.044	-.142	.678**	-.106	-.047	.462**	1	.675**	.632**
	Sig. (2-tailed)	.648	.134	.000	.265	.624	.000		.000	.000
	Sum of Sq and CP	20.854	-2.426	4.578	-6.931	-8.753	22.625	46.250	32.375	33.500
	Covariance	.188	-.022	.041	-.062	-.079	.204	.417	.292	.302
	N	112	112	112	112	112	112	112	112	112
Com to SR	Pearson Correlation	-.083	-.168	.648**	-.081	.125	.683**	.675**	1	.519**
	Sig. (2-tailed)	.382	.077	.000	.398	.191	.000	.000		.000
	Sum of Sq and CP	-41.417	-2.965	4.538	-5.457	24.162	34.652	32.375	49.777	28.536
	Covariance	-.373	-.027	.041	-.049	.218	.312	.292	.448	.257
	N	112	112	112	112	112	112	112	112	112
Com to PR	Pearson Correlation	.109	-.219*	.717**	.039	-.049	.357**	.632**	.519**	1
	Sig. (2-tailed)	.251	.020	.000	.682	.609	.000	.000	.000	
	Sum of Sq and CP	59.985	-4.272	5.548	2.923	-10.471	20.036	33.500	28.536	60.714
	Covariance	.540	-.038	.050	.026	-.094	.181	.302	.257	.547
	N	112	112	112	112	112	112	112	112	112

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\*. Correlation is significant at the 0.01 level (2-tailed).

$H^0$  : The model for quantitative and qualitative aspects will not validate for the real data.

$H^a$  : The model for quantitative and qualitative aspects will validate for the real data.

With the classification of the original group to the predicted group LDA also perform cross validation. In cross validation, each case is classified by the functions derived from all cases other than that case. In this study no misclassified cases which indicate that the model will validate for the real data and also for both quantitative and qualitative aspects. These are given in Tables 6.36 and 6.37.

**Table 6.36: Test of Validity- Level-I**

Cross-validated <sup>a</sup> Case Number	Actual Group	Highest Group				Second Highest Group			
		Predicted Group	P(D>d   G=g)		Squared Mahalanobis Distance to Centroid	Group	P(G=g   D=d)	Squared Mahalanobis Distance to Centroid	
			p	df					P(G=g   D=d)
1	1	1	.377	5	.992	5.332	2	.008	14.965
2	1	1	.406	5	.994	5.086	2	.006	15.166
3	1	1	.014	5	1.000	14.350	2	.000	45.794
4	1	1	.000	5	.978	380.441	2	.022	387.994
5	1	1	.884	5	1.000	1.742	2	.000	40.597
6	1	1	.981	5	1.000	.740	2	.000	37.943
7	1	1	.410	5	1.000	5.050	2	.000	53.309
8	1	1	.983	5	1.000	.704	2	.000	27.775
...	..	..	.....	..	.....	.....	...	.....	.....
...	..	..	.....	.....	.....	.....	.....	.....	.....
110	2	2	.890	5	1.000	1.691	1	.000	23.268
111	2	2	.003	5	1.000	17.780	1	.000	86.329
112	2	2	.022	5	1.000	13.172	1	.000	74.707

**Table 6.37: Test of Validity- Level-II**

Cross-validated <sup>a</sup> Case Number	Actual Group	Highest Group				Second Highest Group			
		Predicted Group	P(D>d   G=g)		Squared Mahalanobis Distance to Centroid	Group	P(G=g   D=d)	Squared Mahalanobis Distance to Centroid	
			p	df					P(G=g   D=d)
1	1	1	.694	4	.998	2.230	2	.002	15.230
2	1	1	.548	4	.982	3.059	2	.018	11.068
3	1	1	.674	4	.989	2.336	2	.011	11.419
4	1	1	.674	4	.989	2.336	2	.011	11.419
5	1	1	.674	4	.989	2.336	2	.011	11.419
6	1	1	.366	4	.961	4.303	2	.039	10.717
7	1	1	.127	4	1.000	7.176	2	.000	38.826
...	..	..	...	..	.....	.....	..	.....	.....
...	...	...	...	...	.....	.....	...	.....	.....
110	2	2	.659	4	.973	2.420	1	.027	9.569
111	2	2	.000	4	1.000	25.042	1	.000	48.926
112	2	2	.532	4	1.000	3.159	1	.000	22.489

H<sup>0</sup>10: The model will not serve for this sector as CAMEL serving for the formal financial sector.

H<sup>a</sup>10 : The model will serve for this sector as CAMEL serving for the formal financial sector.

CAMEL which is originated in North America, is now serving as a universal instrument for measuring and controlling the financial performance of the banking sector throughout the world. The objective of the study is also to derive a model like CAMEL which will measure the performance of the MFIs and serve the purpose for this sector as the CAMEL serve for the banking sector. The study found that the features which are derived from the LDA serve the purpose of the CAMEL. The model equation, the cut-off point for the areas as well as score for the grading are the major features to serve the purpose. The model equations will be representing the MFIs for the qualitative as well as for the quantitative aspects. The cut-off points for the variables are another major output of the study which is derived from the LDA. These cut-offs are the measuring and controlling instrument of the MFIs. And finally, the score will be using to find the grading of the MFIs for the over all as well as for the category which is another major objective of the study. These could be found in table 6.38:

**Table 6.38: Variables Value for Category and Overall**

Classification Function Coefficients			Canonical Discriminant Function Coefficient	
	PO Category		Function 1	
	Small	Big		
Capital Ade	.225	.282	Asset Quality	-.440
Asset Quality	20.421	17.877	Management	19.512
Management	20.081	132.858	Earnings	-.528
Earnings	-.223	-3.276	Liquidity	.084
Liquidity	.011	.496	(Constant)	-.945
(Constant)	-13.425	-33.203	Unstandardized coefficients	
Fisher's linear discriminant functions				

#### 6.4.1 Features of LDA for Quantitative Aspects (Level-I)

##### 6.4.1.1 Cut-off points (Level-I)

**Capital Adequacy cut-off** for the overall and for the category are .01, .22 and .282 for the quantitative aspects, where as the **Asset Quality cut-offs** for the overall and for the category are 20.421, 17.877 and -.44 for the quantitative aspects. **Management cut-off** for the overall as well as for the category are 20.081, 132.858 and 19.512 for the quantitative aspects whereas the **Earnings cut-off** for the overall as well as for the category are -.223, -3.276 and -.528 for the quantitative aspects and finally **Liquidity Management cut-off** for the overall as well as for the category are -.011, .496 and .084.

##### 6.4.1.2 Model equations (Level-I)

Model equation for the overall as well as for the category is given in Table 6.39, which is

representative for that category.

Table 6.39: Model Equations- Level-I						
Category	Const	CA	AQ	Mgt	Earnings	Liquidity
Overall	-.945	.010	-.440	19.512	-.528	0.84
Big	-33.203	.282	17.877	132.858	-3.276	.496
Small	-13.425	.225	20.421	20.081	-.223	.011

### 6.4.1.3 LDA score (Level-I)

LDA score is given in Table 6.40, which helps in preparing the grading for the MFIs overall as well as for the category.

Table 6.40: Discriminant Scores- Level-I										
Original Case Number	Actual Group	Highest Group					Second Highest Group			Discriminant Scores
		Predicted Group	P(D>d   G=g)		Squared Mahalanobis Distance to Centroid	Group	P(G=g   D=d)	Squared Mahalanobis Distance to Centroid	Function 1	
			p	df						
1	1	1	.987	1	.999	.000	2	.001	13.161	-.274
2	1	1	.504	1	.984	.445	2	.016	8.666	.409
3	1	1	.600	1	.990	.274	2	.010	9.533	.266
4	1	1	.600	1	.990	.274	2	.010	9.533	.266
5	1	1	.600	1	.990	.274	2	.010	9.533	.266
6	1	1	.381	1	.966	.769	2	.034	7.477	.619
7	1	1	.017	1	1.000	5.667	2	.000	35.902	-2.638
.....	...	...	.....	..	.....	.....	..	.....	.....	.....
.....	...	...	.....	...	.....	.....	...	.....	.....	.....
110	2	2	.469	1	.980	.523	1	.020	8.339	2.630
111	2	2	.059	1	1.000	3.576	1	.000	30.275	5.244
112	2	2	.339	1	1.000	.915	1	.000	20.867	4.310

### 6.4.2 Features of LDA for Qualitative Aspects (Level-II)

#### 6.4.2.1 Cut-off Points (Level-II)

**Com to GG cut-off** for the overall as well as for the category is 3.093, 1.781 and -0.334 for the qualitative aspects, whereas the **Com to Ex cut-off** for the overall and for the category is 4.341, 12.739 and 2.142 for the qualitative aspects. **Com to SR cut-off** for the overall as well as for the category is 1.117, 0.701 and -0.106 for the qualitative aspects, whereas the **Com to PR cut-off** for the overall and as well for the category is 1.781, -0.391 and -0.142.



Table 6.41: Variables value for Category and Overall				
	PO Category		Canonical Discriminant Function Coefficients	
	Small	Big	Function I	
Commitment to GG	1.117	.701	Commitment to GG	-.106
Commitment to Ex	4.341	12.739	Commitment to Ex	2.142
Commitment to SR	3.093	1.781	Commitment to SR	-.334
Commitment to SP	.948	.391	Commitment to SP	-.142
(Constant)	-12.897	-30.025	(Constant)	-2.689

Fisher's linear discriminant functions

Unstandardized coefficients

### 6.4.2.2 Model Equations (Level-II)

Model equation for the overall as well as for the category is given The table 6.24, which is representative for that category.

Table: 6.42 Model Equation-Level-II					
	Const	CSR	CEx	CGG	CPR
<b>Overall</b>	<b>2.689</b>	<b>-0.106</b>	<b>2.142</b>	<b>-0.334</b>	<b>-0.142</b>
<b>OOSA</b>	<b>12.897</b>	<b>1.117</b>	<b>4.341</b>	<b>3.093</b>	<b>1.781</b>
<b>BIPOOL</b>	<b>30.025</b>	<b>0.701</b>	<b>12.739</b>	<b>1.781</b>	<b>-0.391</b>

### 6.4.2.3 LDA Score (Level-II)

LDA score is given in Table 6.43, which helps in preparing the grading for the MFIs overall as well as for the category.

Table 6.43: Discriminant Scores Level-II										
Original Case Number	Actual Group	Predicted Group	Highest Group				Second Highest Group			Discriminant Scores
			P(D>d   G=g)		P(G=g   D=d)	Squared Mahalanobis Distance to Centroid	Group	P(G=g   D=d)	Squared Mahalanobis Distance to Centroid	Function I
			p	df						
1	1	1	.040	1	.992	4.236	2	.008	13.851	1.645
2	1	1	.043	1	.993	4.086	2	.007	14.126	1.609
3	1	1	.915	1	1.000	.011	2	.000	32.179	-.306
4	1	1	.718	1	1.000	.131	2	.000	29.361	-.052
5	1	1	.624	1	1.000	.241	2	.000	39.321	-.904
6	1	1	.724	1	1.000	.125	2	.000	37.618	-.766
7	1	1	.218	1	1.000	1.520	2	.000	49.178	-1.646
.....	..	..	....	....	.....	.....	..	....	.....	.....
.....	....	....	....	....	.....	.....	...	....	.....	.....
110	2	2	.323	1	1.000	.976	1	.000	22.963	4.379
111	2	2	.005	1	1.000	7.796	1	.000	73.481	8.159
112	2	2	.020	1	1.000	5.411	1	.000	65.706	7.693

H<sup>0</sup>11: There is no link between rating and performance.

H<sup>a</sup>11 : There is positive link between rating and performance.

One of the major determinants of social aspects for the MFIs is its outreach which could be measured by the number of borrowers or amount of loan outstanding staying with the beneficiaries.

How the MFIs are covering the excluded people by providing the financial services may be the measuring points of the outreach. It could be the number of female borrowers it is providing services, number of branches or number of female staffs it has recruited. Whether there is any link between rating and performance that could be judged by the results of the following correlations. If we see that the correlations among the overall financial and social performance with the two other indicator of outreach then we can say that there exists positive relations which is a significant finding of the study. The study found the relations which are shown in Table 6.44.

		Discriminant Scores from L-I	Amt.of Loan Outstanding- PKSF	No. of borrowers-F-P	Discriminant Scores from L-II
Discriminant Scores from L-I	Pearson Correlation	1	.591**	.482**	.555**
	Sig. (2-tailed)		.000	.000	.000
	Sum of Squares and Cross-products	162.169	4.558E10	9381998.679	101.594
	Covariance	1.461	4.144E8	85290.897	.915
	N	112	111	111	112
Amt.of Loan Outstanding- PKSF	Pearson Correlation	.591**	1	.920**	.627**
	Sig. (2-tailed)	.000		.000	.000
	Sum of Squares and Cross-products	4.558E10	3.669E19	8.517E15	5.080E10
	Covariance	4.144E8	3.336E17	7.743E13	4.618E8
	N	111	111	111	111
No. of borrowers-F-P	Pearson Correlation	.482**	.920**	1	.533**
	Sig. (2-tailed)	.000	.000		.000
	Sum of Squares and Cross-products	9381998.679	8.517E15	2.338E12	1.091E7
	Covariance	85290.897	7.743E13	2.126E10	99159.689
	N	111	111	111	111
Discriminant Scores from L-II	Pearson Correlation	.555**	.627**	.533**	1
	Sig. (2-tailed)	.000	.000	.000	
	Sum of Squares and Cross-products	101.594	5.080E10	1.091E7	206.880
	Covariance	.915	4.618E8	99159.689	1.864
	N	112	111	111	112

\*\* . Correlation is significant at the 0.01 level (2-tailed).

H<sup>0</sup>12: The higher performing MFI has a greater access and acceptance to capital as well as to the donor and funder.

H<sup>a</sup>12: The higher performing MFI has no greater access and acceptance to capital as well as to the donor and funder.

The study found the positive relationship between performance and access to capital, which is shown in Table 6.45. The relation between the LDA score for level-I and level-II and the amount of loan outstanding and number of borrowers is positive which, is a significant findings of the study.

Table: 6.45 Correlations-Level-I and Level-II (b)					
		Discriminant Scores from L-I	Amt.of Loan Outstanding-PKSF	No. of borrowers-F-P	Discriminant Scores from L-II
Discriminant Scores from L-I	Pearson Correlation	1	.591**	.482**	.810**
	Sig. (2-tailed)		.000	.000	.000
	Sum of Squares and Cross-products	162.169	4.558E10	9381998.679	101.594
	Covariance	1.461	4.144E8	85290.897	.915
	N	112	111	111	112
Amt.of Loan Outstanding-PKSF	Pearson Correlation	.591**	1	.920**	.627**
	Sig. (2-tailed)	.000		.000	.000
	Sum of Squares and Cross-products	4.558E10	3.669E19	8.517E15	5.080E10
	Covariance	4.144E8	3.336E17	7.743E13	4.618E8
	N	111	111	111	111
No. of borrowers-F-P	Pearson Correlation	.482**	.920**	1	.533**
	Sig. (2-tailed)	.000	.000		.000
	Sum of Squares and Cross-products	9381998.679	8.517E15	2.338E12	1.091E7
	Covariance	85290.897	7.743E13	2.126E10	99159.689
	N	111	111	111	111
Discriminant Scores from L-II	Pearson Correlation	.810**	.627**	.533**	1
	Sig. (2-tailed)	.000	.000	.000	
	Sum of Squares and Cross-products	101.594	5.080E10	1.091E7	206.880
	Covariance	.915	4.618E8	99159.689	1.864
	N	112	111	111	112

\*\* . Correlation is significant at the 0.01 level (2-tailed).

## 6.5 Interpretation of the Results

### 6.5.1 Study Results and Interpretation Model (Level-I)

Two categories are widely separated in terms of management than other variables which is explained earlier.

### **Capital Adequacy**

It measures financial solvency of an MFI. Debt Equity Ratio (DER) and Reserve Ratio (RR) are considered to measure capital adequacy of MFIs; LDA coefficients of Capital adequacy for the categories and overall are .282, .225 and 0.01 respectively.

### **Asset Quality**

It refers the quality of the MFI's assets. CPTL, PAR, DSCR and OSS are considered to measure asset quality of MFIs, LDA coefficients of Asset quality for the categories and overall are 17.877, 20.421 and -0.44 respectively.

### **Management**

Characteristics of good management are generally qualitative in nature where governance, human resource process control and audit as well as IT and strategic planning are considered to influence IAPA, OCAPA, SR, KTA and ROE which are generally used to gauge management soundness of MFIs; LDA coefficients of management for the categories and overall are 132.858, 20.081 and 19.512 respectively.

### **Earnings**

It determines the profitability and capacity to absorb losses by building an adequate capital base. ROA and KTAW are considered to measure earnings of MFIs, LDA coefficients of earnings for the categories and overall are -3.276, -0.223 and -0.528 respectively.

### **Liquidity Management**

In the informal sector CR and ODR are considered to measure liquidity of MFIs; LDA coefficients of liquidity management for the categories and overall are 0.496, 0.011 and -0.945 respectively.

- The equations for the quantitative and qualitative aspects denote the model for any MFI which can be graded for the overall as well as for the categories;
- Model for the industry and for the category and the cut off points for the categories may be identified from the equation model;
- The MFIs can be graded according to the score and discriminate from and within the category;
- The correlation associated with the rank based on quantitative (level-I) function and the qualitative (level-II) function is 0.81 which indicates a very strong correlation;
- The highest correlation associated with the level-I and level-II score and the dimensions

of their aspects are very significant, 0.95, and 0.90 respectively;

- The correlation associated with the level-I score and the 4 dimensions of qualitative aspects are very significant which indicates if an MFI can perform excellent financially it can contribute in qualitative aspects significantly.
- The correlation associated with the level-II score and the 5 dimensions of quantitative aspects are not very significant which indicates that financial performance do less matter with the performance of qualitative aspects.

### **6.5.2 Study Results and Interpretation Model (Level-II)**

Two categories are widely separated in terms of Com to CSR and Com to Ex than other variables which is explained earlier.

#### **Com to CSR**

Translate the commitment of an MFI to the Corporate Social Responsibility and accountability to the clients as well as to the society. Response in disaster (SR1), Internal control (SR2), Interest rate (SR3), Cash flow Proj. (SR4), Over indebtedness (SR5) and Ethical practices (SR6) are considered to measure Com to GG of the MFIs. LDA coefficients of Com to SR for the categories and overall 1.117, 0.701 and -0.106 respectively.

#### **Com to Ex**

Translate the commitment of an MFI to the commitment, accountability to the excluded people and objectivity to the mission. Program coverage (Ex1), Efficiency (Ex2) and Insurance (Ex3) are considered to measure Com to Ex of the MFIs. LDA coefficients of Com to Ex for the categories and overall are 2.167, 4.869 and 0.785 respectively.

#### **Com to GG**

Translate the commitment of an MFI to the transparency in the management, accountability to the clients and objectivity to the mission. Service Charge (GG1), Loan Class (GG2), and Reserve (GG3) are considered to measure COM to GG of the MFIs. LDA coefficients of Com to GG for the categories and overall are 2.526, 0.141 and -0.693 respectively.

#### **Com to PR**

Translate the commitment of an MFI to the reduction of poverty of the clients and objectivity to the mission. Last AGM Held (PR1), and No of EC meeting held this Yr (PR2) are considered to measure Com to PR of the clients. LDA coefficients of Com to PR for the

categories and overall -0.930, -0.470 and 0.134 respectively. The Combine of the quantitative and qualitative aspects the equations denotes the model for the overall as well as for the categories.

From the above study results and interpretation we can now establish the following statements:

- It is the management and commitment to the excluded people coverage which has dominated the model equation to discriminate within and between the categories.
- MFIs to trade off between financial and social aspects.
- The equations for the quantitative and qualitative aspects denote the model for any MFI which can be graded for the overall as well as for the categories;
- The two models developed for quantitative and qualitative aspects will be representative for the industry.
- The coefficient and 'sign' of the variables of the equations indicate the strength and relationship among the variables of the MFIs.
- The cutoff point derived for the category will separate the category for both quantitative and qualitative aspects.
- The model will validate for the real data.
- The mean of the identified variables for the categories will not be same for both quantitative and qualitative aspects.
- This is possible to reduce and group the potential variables for both quantitative and qualitative aspects.
- The cutoff point derived for the category will separate the category for both quantitative and qualitative aspects.
- The model developed for quantitative and qualitative aspects will be representative.
- The grading system developed from the model will be capable to grade the MFIs for both quantitative and qualitative aspects .
- There is positive correlation between the performance of quantitative and qualitative aspects.
- The higher performing MFI has no greater access and acceptance to capital as well as to the donor and funder.
- Com to GG, Com to serve the Ex, Com to SR and Com to PR are the major areas which do matter for qualitative aspects for the MFI;
- Standards for the industry and for the category and cut off point may be identified from the equation model;
- Finally, the the MFIs can be graded according the score and discriminate from the category and within category.

## CHAPTER SEVEN

### RECOMMENDATIONS AND CONCLUSIONS

This chapter is basically the abstracts of the chapters of the dissertation report focusing on the findings and recommendations derived from the study. It is started with the introduction of the study and followed by the overview, literature review, model development, justifications and ended with the conclusion part of the report.

This chapter describes the background of microcredit (MC) and contains the problem statement of the study. It describes the issues, challenges, and aspects that matter in evaluating MFIs. The problem statement sheds light on combining the two aspects (quantitative and qualitative), understanding the background of the problems of MFIs and finally, the way out. In doing so, the problem will be identified and separated from the symptom to determine the unit of analysis and relevant variables and accordingly narrate the research questions and objectives. This chapter also explains the difference between microfinance and MC, features and capacity of MC which describes how it works with combination of micro savings. Then it describes the national and global context of MC and parentage of Microcredit Regulatory Authority in Bangladesh. Finally, this chapter explains the rationale and objective of the study along with the challenges of diversifications. Then this chapter develops different null and alternative hypotheses of the research to describe the different phenomena of the research empirically.

#### **7.1 Overview of Microfinance Institutions Evaluation**

This chapter describes the overview of microfinance institutions evaluation focusing on evaluations of MC and MFIs do what. Then it describes the unique features, growth of MC and MFIs locally as well as globally. Other than this, this chapter describes the importance of regulations other than the role of PKSF and parentage of MRA. Finally, the chapter concludes with the idea of what areas are left still in line with the major criticism against MC.

#### **7.2 Literature Review and Methodology**

This chapter reflects on the existing theories of financial models in relation to rating system of both formal and informal sectors. The purpose of this part is to develop a more relevant model for the evaluation of MFIs in the context and dimensions of MC.

Microfinance institutions (MFIs) face a distinct challenge in terms of mission and vision. For developing the model for MFIs emphasis is given on the issue of “sustainability and outreach”. Theories of financial modeling for predicting bankruptcy for the formal financial sector are extensive. On the contrary, some academic literature for evaluating MFIs are very appealing and universally useful in their approach when some are narrow in the sense that a good number of works are done by the practitioners in this sector on the basis of “as required” and “learning by doing” or by “ purpose”. These tend to be expensive, and lack a common standard to be applied across the board. Moreover most of the methodologies for evaluating the MFIs have not been publicly available, depriving the interested parties of the scope of making further contribution to the field.

Finally, this chapter reviews the works done by Altman to Kaplan from the late 1960s to the first decade of the 20th century in predicting bank failure, early warning system, and bond, bank and corporate rating for the existing formal sector and informal sector of MC pioneers. The apex bodies like GB, PKSF, ACCION, PSIC, CGAP, BASE, DFID, PEARLS, WOCCU, GEMINI, SEEP, Inter-American Development Bank are also included in this review. It also explored the other areas which included dilemmas of MC over: financial vs. social performance in evaluation; whether MC works or not; theories of MC where it describes the origin of MC and phenomena, border and philosophy of MC, criticism, issues, different hybrid of financial services etc.

Other than the methodology part, this part of the chapter also describes the steps and process that are required for the study on the basis of quantitative and qualitative aspects, giving emphasis on the details of the audit report for the quantitative data (level I) and preparation of the questionnaire for collection of the qualitative data (level II).

### **7.3 Model Development-Quantitative Aspects**

This section of the study describes the way it has developed the model for quantitative aspects. For doing so, it has made the exploration and identification of potential areas and variables first including the study of existing practices of the performance evaluations of the MFIs by the apex body, donors, investors and the evaluators. Then the chapter performs screening of the number of areas and variables by avoiding duplication, followed by the selection of preliminary variables and major areas eventually by conducting Factor Analysis. After determination of the preliminary variables and areas then computation of



weight for the variables by using Logit Model is done. Finally it conducts Linear Discriminant Analysis (LDA), for the derivation of the model for quantitative aspects.

Category	Const	CA	AQ	Mgt	Earnings	Liquidity
Overall	-0.945	0.010	-0.440	19.512	-0.528	0.84
Big	-33.203	0.282	17.877	132.858	-3.276	0.496
Small	-13.425	0.225	20.421	20.081	-0.223	0.011

Considering the quantitative aspects that feature the evaluation of MFIs and volatile nature and dimensions of microcredit, the following ratios are selected through Factor Analysis **DER** (Debt to Equity); **PAR** (Portfolio at Risk); **DSCR** (Debt Service Cover Ratio); **DR** (Delinquency Rate); **ODR** (On Demand Realization); **OSS** (Operational Self-sufficiency); **ROE** (Return on Equity); **IAPA** (Income to APA); **OCAPA** (Op. Cost to APA); **SR** (Savings Rate); **KTA** (Capital to TA); **CPTL** (Cost Per Tk. Lent); **ROA** (Return on Assets) **KTAW** (Cap To Total Asset Without FA); **CR** (Current Ratio). These are later weighted for deriving the five major areas of CAMEL and then analyzed through LDA. The linear equation and critical value are the major outputs of LDA to measure the strength and performance of the individual MFI and discriminate the MFI by category as well as by within category by comparing the critical value (cut off point) with the score of that MFI which is identified as the 0.945 for the overall, 33.203 for BIPOOL and 13.425 for the OOSA category. The coefficient and “sign” of the variables of the equations indicate the strength and relationship among the variables of the MFIs. Another feature of LDA is score which has been given for individual MFI contributing in grading for the industry.

#### 7.4 Model Development-Qualitative Aspects

This part of the study contains the proposed model for qualitative aspects. In developing the model, it also explores and identifies potential areas and variables required for evaluating MFIs. Then the chapter performs screening by avoiding duplication of the number of areas and variables and by conducting Factor Analysis eventually. Different business concepts including the Hermes' Approach have been used to derive the major areas and variables. Then get a feedback for the qualitative aspects through a Questionnaire based on 5 point scale using the selected variables from the concern of the same POs; After getting the feedback, mean of the responses for big and small POs

determine and we compute the weight by using Logit model;. Finally, it conducts Linear Discriminant Analysis (LDA) the data of weighted value of major areas for 112 POs for the derivation of the model for qualitative aspects.

To derive the model for qualitative aspects variables and areas that are considered significant are processed for Linear Discriminant Analysis after screening the variables and areas by avoiding duplication which is being weighted by the same Taylor expansion of the Logit model. For determining the variables, six principles of the client protection campaign including avoidance of over-indebtedness; transparent pricing; appropriate collections practices; ethical staff behavior; mechanisms for redress of grievances and privacy of client data are given preference. Besides, different business model like Hermes' Approach and ISO 26000 have been used to derive the major areas and variables. Here the issues identified and checked considering the dimensions of MC are response in disaster, internal control, interest rate, cash flow proj., over indebtedness, ethical practices, business plan, good govt practices , program coverage, efficiency, insurance, yr. of services, loan class, service charge, reserve, number of EC meeting this yr., and last AGM held. These are later weighted and analyzed through logit model for deriving the four major areas of qualitative aspects, which is mentioned here as variables of level-II and then analyzed through LDA. The variables are Commitment to Good Governance (**CGG**), Commitment to Serve the Excluded people (**CEx**), Commitment to Social Responsibility (**CSR**), and Commitment to Poverty Reduction (**CPR**), for the excluded people, regarded which all as the major areas for the MFI.

The linear equation and critical value are the major outputs of LDA in measuring the strength and performance of the individual MFI. Depending on the qualitative aspects that matter in evaluating MFIs and volatile nature and dimensions of microcredit, the following linear equation and critical value are the major outputs of LDA which can measure the strength and performance of the individual MFI and discriminate the MFI by category as well as by within category by comparing the critical value with the score of that MFI which is identified as 2.795 for the overall, 12.811 for OOSA and 27.515 for the BIPOOL category. The coefficient and 'sign' of the variables of the equations indicate the strength and relationship among the variables of the MFIs. Finally, the MFIs can be graded according to the score and discriminate from and within category.

	Const	CSR	CEx	CGG	CPR
Overall	-2.689	-0.106	2.142	-0.334	-0.142
OOSA	-12.897	1.117	4.341	3.093	1.781
BIPOOL	-30.025	0.701	12.739	1.781	-0.391

### 7.5 Study Results: Justifications and Interpretations

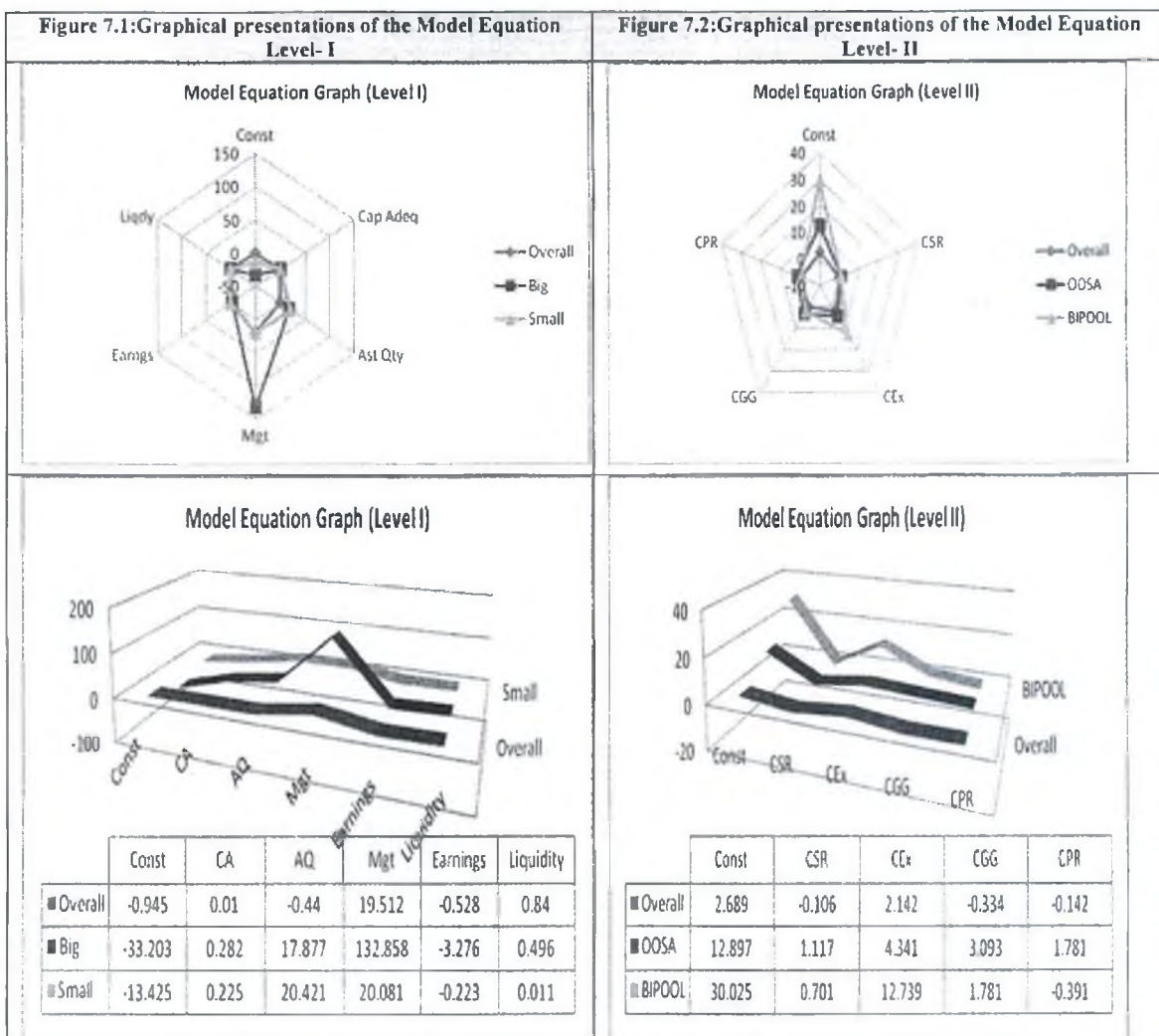
This chapter summarizes the justifications of the models for quantitative and qualitative aspects through which all the hypotheses are interpreted. Rejection of the null hypothesis establishes the alternate hypothesis. The null hypotheses were formed regarding challenges of the MFIs like the mean of the identified variables for the categories, possibility to reduce and group the potential variables, whether the cutoff point derived for the category may separate or not, whether the model could be representative, grading could be purposive, trade-off between qualitative and quantitative aspects, validity of the model for real data, significance of the purpose i.e. whether it can serve for the microfinance sector as a CAMEL instrument as it serves for the formal financial sector; any link between rating and performance and accessibility of capital would be increased for the MFI.

This part also explains the process of developing the model for quantitative aspects. In doing this, it has made the exploration and identification of potential areas and variables of first which includes the study of existing practices of the performance evaluations of the MFIs by the apex body, donors, investors and the evaluators. Then there will screening of the number of areas and variables by avoiding duplication to be followed by the selection of preliminary variables and major areas eventually by conducting Factor Analysis. After determination of the preliminary variables and areas then computation of weight for the variables by using Logit Model is done. Finally, it has conducted the Linear Discriminant Analysis (LDA), for the derivation of the model for quantitative aspects.

In the LDA, in testing significance in level-I and level-II, it may be noted that the eigen value, canonical correlation, wilkis' lambda statistic associated with the function which transoms to a chi-square value with 5 df are significant beyond 0.05 level. This indicates that the null hypothesis that the population means of the discriminant function in all groups are equal, is rejected.

The graphic presentaton (Figures:7.1 and 7.2) denotes the quantitative and qualitative relationship among the varriables as well as between the categories. For quantitative

aspects, the role of management for BIPOOL (red line) can discriminate the three categories significantly where the role of asset quality also discriminates between the overall and the categories (BIPOOL/OOSA) whereas the role of Earnings CAR Liquidity, and Asset Quality between the categories and overall categories is significant in discriminating them. Again, the role of liquidity situation for the big categories POs is opposite but less strength in discriminating overall and small categories. For qualitative aspects, the role of CSR for BIPOOL (red line) can discriminate the other categories significantly where the role of CEx CGG CPR discriminate between the overall and the categories (BIPOOL/OOSA) for the qualitative aspects respectively.



Correlating between the quantitative and qualitative aspects, the two equations model denotes the performance of the MFIs of the overall as well as for the categories. The correlation associated with the rank based on quantitative (level-I) function and the qualitative (level-II) function is 0.81 which indicates a very strong correlation. The

highest correlation associated with the level-I and level-II score and the dimensions of their aspects are very significant, 0.95, and 0.90 respectively.

The correlation associated with level-I score and the 4 dimensions of qualitative aspects is very significant, which indicates if an MFI can financially perform excellent; it can contribute to qualitative aspects significantly.

The correlation associated with level-II score and the 5 dimensions of quantitative aspects are not very significant which indicate that financial performance does less matter with the performance of qualitative aspects. Standards for the industry and for the category and cut off point may be identified from the equation model.

The above graphic presentation (Fig:7.2) denotes the qualitative relationship among the variables as well as between the categories. The role of commitment to the excluded people can discriminate the three categories significantly where the role of services provided to the excluded people also discriminate between the BIPOOL and the OOSA categories. Moreover, the relationship of among Commitment to Good Governance (CGG), Commitment to Serve the Excluded People (CEx), Commitment to Social Responsibility (CSR) and Commitment to Poverty Reduction (CPR) to the excluded people is positive between the BIPOOL/OOSA categories and overall categories.

## 7.6 Study Results, Findings and Interpretation

The study found the following results based on the hypotheses, tested for quantitative, qualitative and combined aspects:

### 7.6.1 Study Results, Findings and Interpretation–Quantitative Aspects

- This study found that the variables, **DER PAR DSCR DR ODR OSS ROE IAPA OCAPA SR KTA CPTL ROA KTAW CR** for quantitative aspects of five major areas where management has dominated.
- In the study it is found, considering the quantitative aspects the equation denote the model for the overall as well as for the categories; Capital Adequacy, Asset Quality, Management, Earnings, and Liquidity are the major five areas which do matter for evaluating the performance of the MFIs.
- The linear equation and critical value are the major outputs of LDA which measure the strength and performance of the individual MFI and discriminate the MFI by category as well as within category by comparing the critical value (cut off point) with the score of that MFI. For quantitative aspects critical value is identified as the 0.945 for the overall, 33.203 for BIPOOL and 13.425 for the OOSA category.
- The study found that the management has dominated the model equation to discriminate within and between the categories. For quantitative aspects the role of

management can discriminate the three categories significantly where the role of asset quality also discriminate between the overall and the categories (BIPOOL/OOSA) whereas the role of Earnings CAR, Liquidity, and Asset Quality between the categories with overall categories are significant in discriminating them. Again, the role of liquidity situation for the big categories POs are opposite but less strength in discriminating overall and small categories.

- The study found that the mean of the identified variables for the categories are not same for quantitative aspects and the model validitates for the real data which may make it possible to reduce and group the potential variables for quantitative aspects.
- The study found that the standards for the industry and for the category and cut off points for the major areas of CAMEL do matter in evaluating and monitoring the MFIs.
- The study found a score for individual MFI which is one of the major output of the LDA for quantitative aspects. The MFIs can be graded according to the score and discriminate from the category and within category.

#### 7.6.2 Study Results, Findings and Interpretation-Qualitative Aspects

- This study found that the role of Commitment to the Excluded people can discriminate the three categories significantly where as the Commitment to Poverty Reduction to the excluded people, Commitment to Good Governance (CGG), and Commitment to Social Responsibility (CSR) has to trade-off among these which is similar with the trend of social cost and returns in the early stage (Todaro & Smith, 2008). Moreover, the relationship of among Commitment to Good Governance (CGG), Commitment to Serve the Excluded people (CEX), Commitment to Social Responsibility (CSR) and Commitment to Poverty Reduction (CPR) to the excluded people are positive between the BIPOOL/OOSA categories with overall categories.
- Considering the qualitative aspects the equations denote the model for the overall as well as for the categories; Com to GG, Com to serve the Ex, Com to SR and Com to PR are the major areas which do matter for evaluating the performance of the MFIs.
- The mean of the identified variables for the categories are not same for qualitative aspects and the model validitates for the real data which may make it possible to reduce and group the potential variables for qualitative aspects.
- This study found the issues, response in disaster, internal control, interest rate, cash flow proj., over indebtness, ethical practices, business plan, good government practices, program coverage, efficiency, insurance, year of services, loan class, service charge, reserve, number of EC meeting held this year., and last AGM held as significant for four major areas of qualitative aspects where commitment to the excluded people has dominated the model.
- It is the commitment to the excluded people coverage which has dominated the model to discriminate within and between the categories.
- The study found that the standards for the industry and for the category and cut off points for the major areas of qualitative aspects do matter in evaluating and

monitoring the MFIs.

- The study found a score for individual MFI which is one of the major output of the LDA for qualitative aspects. The MFIs can be graded according to the score and discriminate from the category and within category.

### 7.6.3 Study Results, Findings and Interpretation-Combining Two Aspects

- The study found that the model developed for quantitative and qualitative aspects are representative which validates the real data and there is positive link between rating and performance evaluation.
- The correlation associated with the rank based on quantitative (level-I) and qualitative (level-II) function is 0.81, which indicates a very strong correlation. The Pearson and Spearman's correlation is associated with the level-I and level-II score are 0.810 and 0.624 respectively and significant at .01 level.
- The correlation associated with the level-II score and the 5 dimensions of quantitative aspects are not very significant which indicates that financial performance does less matter with the performance of qualitative aspects.
- The correlation associated with level-I score and the 4 dimensions of qualitative aspects are very significant which indicates if an MFI can perform excellent financially it can contribute in qualitative aspects significantly.
- The cutoff points derived for the category will separate the category for both quantitative and qualitative aspects.
- The mean of the identified variables for the categories will not be same for both quantitative and qualitative aspects.
- This is possible to reduce and group the potential variables for both quantitative and qualitative aspects.
- The higher performing MFI has greater access and acceptance to capital as well as to the donor and funder.

## 7.7 Recommendations

- This study recommends the variables, **DER PAR DSCR DR ODR OSS ROE IAPA OCAPA SR KTA CPTL ROA KTAW CR** for measuring the quantitative performance of MFIs for the categories as well as for the overall category.
- This study recommends the issues, **response in disaster, internal control, interest rate, cash flow proj., over indebtedness, ethical practices, business plan, good government practices, program coverage, efficiency, insurance, year of services, loan class, service charge, reserve, number of EC meeting held this year., and last AGM held** in measuring the qualitative performance of MFIs for the categories as well as for the overall category.
- As the study finds that the mean of the identified variables for the categories are not same for quantitative aspects and the model validates for the real data. This is why the study recommends the model equations where it is possible to reduce and group the potential variables for both quantitative and qualitative aspects.
- It is the management and commitment to the excluded people coverage which has

dominated the model equation to discriminate within and between the categories. This finding recommends giving emphasis to management for achieving the mission of sustainability as well as to commitment to the excluded people for achieving the social mission of the MFI.

- This study recommends the variables to be considered for determining the rating system of MFIs by using a multivariate analysis which is focused on outreach and sustainability.
- The equations for the quantitative and qualitative aspects denote the model for any MFI which can be graded for the overall as well as for the categories; The grading system developed from the model will be capable to grade the MFIs for both quantitative and qualitative aspects .
- An initiative can be taken to develop a unique and universal rating system for measuring the financial as well as the social performance of the MFIs so that the apex funding authority regulatory authority as well as the donor and govt. agencies can use the model to avoid criticisms and achieve the mission of the MFIs. The higher performing MFI has a greater access and acceptance to capital as well as to the donor and funder.
- The two models developed for quantitative and qualitative aspects will be representative for the industry. The cutoff points derived for the category will separate the category for both quantitative and qualitative aspects.
- The equations for the quantitative and qualitative aspects denote the model for any MFI which can be graded for the overall as well as for the categorie.
- Model for the industry and for the category and the cut off points for the categories may be identified from the equation model.
- The MFIs can be graded according to the score and discriminate from and within the category.
- There is possitive correlation between the performance of quantitative and qualitative aspects.
- MFIs have to trade-off between financial and social aspects but in the long run social return will be higher than the social cost which indicates that the MFI can emphasis on the both aspects.
- The higher performing MFI has a greater access and acceptance to capital as well as to the donor and funder.
- Finally, the model can serve for this sector as CAMEL serving for the formal financial sector.

## 7.8 Conclusion

In absence of a universal evaluation system and in the context of increase of outreach in terms of horizontal and vertical as well as diversification and dimensions in terms of product and program variation, lending and funding methodology, the study takes MC to the next stage of sustainable development to fight with the future challenges of MC and



add value to cope with the situation and keep pace of development of MC focusing on Monitoring Evaluation and Reporting (MER).

The study concludes that MC per se is not responsible for all the criticisms it is facing now. It is the management and commitment of the MFIs for which MC can be good or bad though there maybe tradeoff between some quantitative and qualitative aspects likes client coverage. Otherwise, it works on its own way i.e. it alone might not alleviate poverty but it has tremendous potential in generating aspiration to the poor people and transform them into marginal economic soldier to fight against poverty.

Finally, in future study of determining performing and not performing MFIs or PKSf and Non-PKSf MFIs, national and international MFIs, social impact or contribution in GDP could be an additional component and a landmark in the institutional development of MC.

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## Appendix A

### List of Appendices

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## Appendix I Guideline of MRA

### Clarification on Interest Rate and other relevant issues of Microcredit

Microcredit Regulatory Authority has recently issued certain guidelines on interest rate of microcredit. The following are the highlights:

1. Maximum interest chargeable set at 27.00 (twenty seven) percent per annum.
2. Calculation of interest on loans on a Declining Balance Method.
3. Minimum number of installments on general loans must be 50 (fifty).

### The following clarifications are given for the above issues:

In Bangladesh interest on microcredit is calculated on a flat-rate which leads to misunderstanding and confusion about the effective rate of interest. Due to this method of calculation the effective rate of interest charged apparently at 15% goes up to a minimum of 30% which is not clear to many including the clients. Under this method, if a client borrows Taka 1,000 at 15% per annum, the total amount to be paid back at the end of the year is calculated first, which works out to Taka 1,150 (Principal 1,000 + Interest 150). If the MFI recovers this total amount in 50 installments, each installment is calculated to be equal to Taka 23 (Taka 1,000 divided by 50 = Taka 20 against Principal and Taka 150 divided by 50 = Taka 3 against Interest). This in effect means that at the time of repayment of each installment interest is still calculated on the original Principal of Taka 1,000. For example, when repayment is made on the 50th installment, the Principal amount outstanding is only Taka 20, and the interest at 15% per annum should be equal to Taka 0.108 instead of Taka 3 that is charged under the system. This results in the effective rate of interest to increase and go as high as double the original rate, i.e., 30%.

In spite of the fact that interest rate is calculated on a declining balance method in the banking sector of Bangladesh, as well as the rest of the world, it is being calculated on the basis of the so called “flat” rate in the microcredit sector of the country. Effective rate of interest further depends on the grace period, compulsory deductions and charges levied upon the client, and above all, the number of installments. If these factors are taken into account, the effective rate can go beyond twice the original rate (in some cases even up to 37% – 46%). It must be kept in mind that the financially disadvantaged client can only benefit from the loan if he is able to generate enough profit to cover for the expenses spent on interest. Only then will he be able to attain the objective of obtaining the loan. Incidentally it may be mentioned that many people are under the mistaken belief that it is not possible to operate profitably as a lender in the microcredit sector through bank borrowings at the existing rate of interest. In reality, the cost

of fund for the microcredit sector is only 7% on average compared to 3-4% for the banking sector. It may be noted that the average amount of savings for the MFIs is 30% of the loans outstanding on which only a maximum of 5% interest is paid. Further, the Institutions have a large amount of retained earnings, the cost of which is zero. Hence the cost of fund of the microfinance industry works out to 7% taking into consideration the zero cost of retained earnings, cheaper fund from savings along with the traditional cost of bank borrowing. Fixing the maximum chargeable interest rate at 27% would mean that the gross margin for the Institutions would be 20% which is still considered high. The margin is large enough to cater for increased overhead expenses and / or costlier borrowings from banks and still operate profitably. Hence it is possible to further reduce the rate of interest on loans offered by the microcredit institutions through reduced overhead costs, attaining operational efficiency etc. MRA will continue to work to this end in the future.

## Appendix II

**Questionnaire for Level-II Feedback**

**Objective:** This study is a part of the PhD Program. The objective of the study is to measure the standards for evaluating Micro Finance Institutions (MFIs). As a follow up part of the study this questionnaire is intended to measure the qualitative aspects of the Partner Organisations (POs) in terms of the compliance and practices of the policy guidelines as developed by PKSf.

**General information:****1. Name of the PO:**

**2. Category:** (a) OOSA  (b) BIPOOL

**3. Working Area (Division):**

Dhaka  Ctg  Raj  Khul  Bari  Regional   
National

**4. Yr of establishment:****5. Management Information:**

- a. Nos EC meeting held during last financial yr   
b. Last date of EC meeting held this yr:

**6. Program Information:**

- a. Type of Financial Services Product: Credit  Credit+   
b. Sources of MC program fund: PKSf  PKSf-Non PKSf   
c. Other program information:

	PKSF		Non-PKSf		Total	
	M	F	M	F	M	F
No of br						
No of samitees						
No of members						
No of borrowers						
No of staffs						
Loan outstanding						

## 7. Qualitative Information:

Sl No	Attributes/ Issues	The PO follows the policy/guideline as developed by PKSF	In consideration of degree of compliance				
			E	VG	S	BS	NS
			5	4	3	2	1
I.	Reserve	The PO is maintaining DMR/LLP as per the PKSF guideline.					
II.	Service charge	Utilizes the service charge as per the policy guide line.					
III.	Loan classification	Classifies its loan accordingly.					
IV.	Response in disaster	Played an client friendly role (rescheduled etc.) during natural disaster like 'Sidor' / 'Ayla'					
V.	Interest rate	Imposes the interest rate on a transparent basis ( based on cost structure analysis)					
VI.	Ethical practices	Committed to ethical practices.(Doesn't practices of providing new loan by adjusting the dues of the previous loan)					
VII.	Over indebtness	Follows the over lapping guideline accordingly.					
VIII.	HR practice	Has the PO developed service rule? If yes, it practices accordingly.	Yes			No	
IX.	Efficiency	Has it received training for CEO, managers, AOs and FOs?	Yes			No	
		If yes, training performance is reflected in operation.					
X.	Business plan	Does it prepare business plan?	Yes			No	
		If yes, it acts accordingly.(visible growth sign )					
XI.	Internal control	Has it developed internal audit team?	Yes			No	
		If yes, it acts purposively.(as third eye of the management)					
XII.	Insurance	Has it offered insurance policy for the beneficiaries?	Yes			No	
		If yes, It serves accordingly.(claims are met smoothly)					
XIII.	Prog.m. coverage	Has the program for UP? (client outreach)	Yes			No	
		If yes, it runs the program efficiently.					
XIV.	Cash flow Proj.	Does it prepares a cash flow projection every year	Yes			No	
		If yes, It manages liquidity as needed.					

### Name of concern internal audit team member/ Concern Officer (CO):

You are requested to respond (putting one ✓ for one attribute) /fill up the questionnaire based on your evaluation of the above qualitative attributes of the PO and pave the way to develop a model for the MFI.

Sincerely yours,

Md. Zamanur Rahman  
PhD Fellow  
IBA, University of Dhaka.

### Legends for acronyms:

E= Excellent; VG= Very Good; S= Satisfactory; BS= Below Satisfactory; NS= Not Satisfactory ; UP= Ultra Poor; AO= Accounts Officer; FO= Field Officer; CO= Concern Officer; PO= Partners' Organization (MFI); DMR= Debt Mgt. Reserve; LLP= Loan Loss Provision.

## Appendix III

### District-wise List of Partner Organizations

#### BARISAL DIVISION

##### Barguna District

1. **Sangkalpa Trust**  
Sangtai Plaza, Pathargata,  
Barguna, Phone: (04455)-75122, 75023  
Mobile: 01713-046725, 01715-038662  
**Lialson Office:**  
Prince Tower, House#584, Road#06  
Baitul Aman Housing Society Ltd.  
Adabar, Mohammadpur, Dhaka-1207  
Email- [sangkalpa@bangla.net](mailto:sangkalpa@bangla.net).
2. **SANGRAM (Sangathita Gramaunnan Karmasuchee)**  
Shahid Smritee Sorak, Barguna 8700.  
Phone - (0448) 62828  
Email: [sangrammasum@yahoo.com](mailto:sangrammasum@yahoo.com)

##### Barisal District

3. **Akota Samaj Unnayan Kendra (ASUK)**  
Village: Chengutia, Post: Dhandoba  
Agoiljhara, Barisal.  
Mobile -01712-817634, 01712-809618  
Email-asuk\_bari@yahoo.com

##### Pirojpur District

4. **Dak Diye Jai**  
Bypass Road (Near New Bus Stand)  
House: 1, Masimpur, Upazila & Post:  
Pirojpur, District: Pirojpur-8500  
Phone - (0461) 62763, 01711-243388  
Email- [ddj\\_org@yahoo.com](mailto:ddj_org@yahoo.com)
5. **Eskandar Welfare Foundation (EWF)**  
Krishna Nagar, Pirojpur Sadar,  
District: Pirojpur  
**Liaison Office**  
House#1, Road#27, Block-J  
Banani Model Town, Dhaka-1213  
Mobile- 01711-863007  
E-mail- [ewfpirojpur@yahoo.com](mailto:ewfpirojpur@yahoo.com)
6. **Shakaler Jannya Kallyan (SJK)**  
Vill: Shankar pasha  
Post: Parerhat, District: Pirojpur-8502.  
Mobile - 01718-449632; 01716513406  
Email- [shamima\\_sjk@yahoo.com](mailto:shamima_sjk@yahoo.com)

#### CHITTAGONG DIVISION

##### Brahmanbaria District

7. **HOPE**  
Aliabad, Nabinagar, Brahmanbaria-3410  
Phone: 01711-341975

Email: [a\\_kollul@yahoo.com](mailto:a_kollul@yahoo.com)

##### Chittagong District

8. **Community Development Centre (CODEC)**  
House: 47/H, Road:1, Ispahani Park  
South Khulshi, Chittagong  
Phone: 031- 610607, 031- 2552298, 2853824  
Email: [khursidcodec@gmail.com](mailto:khursidcodec@gmail.com).  
[codecdidar@gmail.com](mailto:codecdidar@gmail.com)  
Web: [www.codecbd.org](http://www.codecbd.org)
9. **Muktupath Unnayan Kendra**  
Muktupath Bhaban  
343, Jalil Nagar, Raozan  
Upazila & Post: Raojan,  
Dist: Chittagong-4340.  
Phone : (03026) 56031, 01819-325908  
Email: [salimmuktupath@yahoo.com](mailto:salimmuktupath@yahoo.com)
10. **Mamata**  
House: 4, Lane: 01, Road: 01, Block: L  
Halishahar Housing Estate, Chittagong.  
Phone: 031-727295, 01199-761915  
Email: [mamtahq@yahoo.com](mailto:mamtahq@yahoo.com)

##### Comilla District

11. **Ansar Ali Foundation for Integrated Development (AFID)**  
Shimpur, Comilla-3505  
Phone: 01720527960
12. **Development Initiative for Social Advancement (DISA)**  
Hospital Road, Chandina, Comilla  
**Liaison Office:**  
E/11 Pallabi Extension, Mirpur I I  
Dhaka 1216.  
Mobile: 01720-084085  
Email:[disabd@citechco.net](mailto:disabd@citechco.net),  
[disadhaka@yahoo.com](mailto:disadhaka@yahoo.com)

##### Cox's Bazar District

13. **Mukti Cox's Bazar**  
Sarda Bhaban, Goldighirpar  
Cox's Bazar.  
Phone : (0341) -62558  
Mobile: 01713-196800  
Email [mukticox@yahoo.com](mailto:mukticox@yahoo.com)

##### Noakhali District

14. **DWIP Unnayan Sangstha**  
DUS Centre, Sayedia Bazar  
Hatiya, Noakhali.  
**Liaison office**  
24/5, Mollika, Prominent Housing  
3 Pisciculture Road, Mohammadpur  
Dhaka-1207  
Phone: 9122145, Email: [dus@bdcom.com](mailto:dus@bdcom.com)

## Appendix III

### District-wise List of Partner Organizations

Mobile: 01715-475222

Fax: 880-2-8823542, 8823614, 8851928

Email: [general@bdmail.net](mailto:general@bdmail.net),

Web: [www.brac.net](http://www.brac.net)

#### DHAKA DIVISION

##### Dhaka District

15. **"ANTAR" Society for Development**  
8A/4 (3rd Floor), Tajmahal Road, Block-C,  
Mohammadpur, Dhaka-1207  
Phone – 8123889  
Mobile – 01711-112323  
Email – [antarsd@agni.com](mailto:antarsd@agni.com)
16. **Annesha Foundation (AF)**  
31/2, Senpara Parbata (2<sup>nd</sup> floor)  
Section-2, Mirpur-10, Dhaka-1216  
Phone: 9005637  
E-mail: [afdghaka@bdmail.net](mailto:afdghaka@bdmail.net)  
Web: [www.annesha-foundation.org](http://www.annesha-foundation.org)
17. **ASA**  
ASA Tower, 23/3, Khilji Road,  
Shyamoli, Dhaka-1207.  
Phone: 8111418, 8116804, 8110934-5, 8119828  
Fax: 880-2-9121861  
Email: [asabd@asa.org.bd](mailto:asabd@asa.org.bd)  
Web: [www.asa.org.bd](http://www.asa.org.bd)
18. **Association for Renovation of Community Health Education Services (ARCHES)**  
House: 7, Road: 13 (New)  
Dhanmondi R/A, Dhaka-1205  
Phone: 9126433, 9114870, 01819215427  
Email: [arches@btcl.net.bd](mailto:arches@btcl.net.bd)  
[archessirajgoni@yahoo.com](mailto:archessirajgoni@yahoo.com)
19. **BEDO**  
8/6, Segun Bagicha, Ramna  
Dhaka-1205  
Phone: 9554798, 9568906  
Email: [bedo@bijoy.net](mailto:bedo@bijoy.net)  
Web: [www.bedobd.org](http://www.bedobd.org)
20. **Bangladesh Extension Education Services**  
House: 183, Eastern Road, Lane: 2  
New DOHS, Mohakhali, Dhaka-1206  
Phone : 9889732-3, 01711409552  
Email: [beesbd@gmail.com](mailto:beesbd@gmail.com)
21. **Bastob- Initiative for people's self development**  
4/7 Humayun Road, Block- B  
Mohammedpur, Dhaka- 1207  
Phone: 8128805, 9111531, 01720-513757  
Email: [bastobdhaka@gmail.com](mailto:bastobdhaka@gmail.com)  
[info@bastob.org](mailto:info@bastob.org)
22. **BRAC**  
BRAC Center, 75, Mohakhali C/A  
Dhaka-1212  
Phone # 9881265, 8824180-7
23. **Blind Education and Rehabilitation Development Organisation (BERDO)**  
3/1, Road: 11, Rupnagar, Section: 5  
Mirpur, Dhaka 1216.  
Phone: 9009451  
Email: [berdo@citechco.net](mailto:berdo@citechco.net)
24. **CARSA Foundation**  
749, Satmasjid Road  
Dhanmondi R/A, Dhaka-1209  
Phone: 8123705, 8120634  
Mobile. 01713-204682, 01717172349  
01711-181464
25. **Centre For Mass Education in Science (CMES)**  
House: 823, Road: 19 (old)  
Dhanmondi R/A, Dhaka-1209  
Phone : 8111898, 01711-439324  
Email: [cmes@citechco.net](mailto:cmes@citechco.net),  
[cmesbd@yahoo.com](mailto:cmesbd@yahoo.com)
26. **CEDAR (Concern for Environmental Development & Research)**  
768, Satmasjid Road, Dhanmondi  
Dhaka-1209  
Phone: 9121504, 9145667  
Mobile: 01713-002426, 01715-150509  
Email: [cedar@bdonline.com](mailto:cedar@bdonline.com)
27. **Development Organisation of the Rural Poor (DORP)**  
36/2, East Shewrapara, Mirpur, Dhaka-1216  
Phone – 8034785-6  
Mobile – 01711-520351  
Email – [dorpc@bangla.net](mailto:dorpc@bangla.net)
28. **Dhaka Ahsania Mission (DAM)**  
House: 19, Road: 12 (New)  
Dhanmondi R/A. Dhaka-1209  
Phone: 8119521-22, 9123402, 9123420, 8115909  
Fax: 88-02-8113010, 8118522  
Mobile: 01716-859887; 01811480044  
Email: [dambgd@bdonline.com](mailto:dambgd@bdonline.com)
29. **ENDEAVOUR**  
3 No. Pool Poddar Bari, Bohula Road  
Habigonj Sadar, Habigonj.  
Phone: 0831-62307, 01715120898  
Email: [endhobi@yahoo.com](mailto:endhobi@yahoo.com)  
**Liaison Office**  
5/15 Humayun Road, Block-B,  
Mohammadpur, Dhaka-1207.  
Phone: 9124342
30. **Family Development Services& Research**

### Appendix III

#### District-wise List of Partner Organizations

- (FDSR)  
House: 216, Uttara Ashkona Medical Road  
Dhaka-1230  
Phone :8920351, 8912469
31. **Gono Kallayan Trust (GKT)**  
Head Office: Sauria, Manikgonj.  
**Dhaka Liaison Office:**  
19-20, Adorsa Chayaneer Housing Society,  
Ring Road Shamoli, Dhaka-1207,  
Phone : 8111576, 8123102.  
Email: [gkt@bdcom.com](mailto:gkt@bdcom.com)
32. **GonoShasthaya Kendra**  
Mirzanagar, Savar Cantonment,  
Savar, Dhaka- 1205.  
Mobile: 01735-844281, 01711531060  
Email: [gk@citechco.net](mailto:gk@citechco.net)
33. **Gono Unnayan Prochesta (GUP)**  
13A/3A, Babar Road, Block-B  
Mohammadpur, Dhaka-1207.  
Phone : 8113216, 8123389  
Email: [gup@dhaka.net](mailto:gup@dhaka.net)
34. **Grameen Krishi Foundation (GKF)**  
College Road, Alamnagar  
Rangpur Sadar, Rangpur  
Phone: 0521-64893  
E-mail: [grameenk@yahoo.com](mailto:grameenk@yahoo.com)  
**Liaison Office:**  
Grameen Bank Bhaban,  
Mirpur-2, Dhaka-1216  
Phone: 8012690
35. **Habited and Economy Lifting Program (HELP)**  
Alia Madrasa Road, Upazila Bagerhat Sadar.  
Bagerhat  
Phone: 0468-62634, Mobile: 01915474370  
01711-155759  
Email: [help@btb.net.bd](mailto:help@btb.net.bd),  
[helpbagerhut@yahoo.com](mailto:helpbagerhut@yahoo.com)
36. **Hilful Fuzul Samaj Kallayan Sangstha**  
Talukder Manson, Nabogram Road, Barisal.  
Phone: 01715-245412.  
Email: [hfsks@bdonline.com](mailto:hfsks@bdonline.com)
37. **New Era Foundation**  
Momtaj Villa (2<sup>nd</sup> floor)  
70/A, Purana Paltan Line  
Momtaj Villa (2<sup>nd</sup> floor)  
VIP Road, Dhaka-1000  
Phone: 8333839, 01714-029549  
Email: [biswas.net@gmail.com](mailto:biswas.net@gmail.com)
38. **Palli Bikash Kendra (PBK)**  
27/C Asad Avenue (1<sup>st</sup> Floor), Block-E  
Mohammadpur, Dhaka-1207  
Phone : 9132389  
E-mail: [info@pbk-bd.org](mailto:info@pbk-bd.org)
- Web: [www.pbk-bd.org](http://www.pbk-bd.org)
39. **Palli Shishu Foundation of Bangladesh**  
Dr. Tofael Palli Shishu Bhaban  
House no: 6/A, Barabagh, Section: 2  
Mirpur, Dhaka-1216  
Phone: 8013628, 9004075  
Email: [psf@bangla.net](mailto:psf@bangla.net),  
[psg\\_bd76@yahoo.com](mailto:psg_bd76@yahoo.com)  
Web: [www.pallishishu.org](http://www.pallishishu.org)
40. **Prodipan**  
Shaheb Bari Road, Maheswarpasha  
Daulatpur, Khulna-9203  
Phone: 041- 2870008, Cell: 01678-138409  
Email: [ppnh@khulna.bangla.net](mailto:ppnh@khulna.bangla.net)  
**Liaison Office:**  
6/1 A, Block-F, Lalmatia, Dhaka-1207  
Email: [prodipan@neksus.com](mailto:prodipan@neksus.com)
41. **Social Upliftment Society (SUS)**  
76/A Uttar para, Savar  
Dhaka-1340.  
Phone : 7711229, 7713293  
Mobile : 01715022673; 01715315026 (ED)  
Email: [sus@citechco.net](mailto:sus@citechco.net),  
[susbd01@yahoo.com](mailto:susbd01@yahoo.com)  
Web: [www.bangladeshngo.com/ngo/sus](http://www.bangladeshngo.com/ngo/sus)
42. **Sojag (Somaj-O-Jati Gathan)**  
Village & Post: Shailan  
Dhamrai, Dhaka.  
Mobile:01713-005314  
Email:[maiivsban@citechco.net](mailto:maiivsban@citechco.net),  
[sojag86@yahoo.com](mailto:sojag86@yahoo.com)
43. **South Asia Partnership Bangladesh**  
House: 63, Block: Ka, Mohammadpur  
Housing, Pisciculture & Farming Cooperative  
Society Ltd, Dhaka-1207.  
Phone : 8112103, 8114697  
Email: [sapinfo@sap-bd.org](mailto:sapinfo@sap-bd.org)
44. **Swanirvar Bangladesh**  
5/5, Block-C, Lalmatia, Dhaka-1207.  
Phone : 9116558, 9116808  
Mobile: 01711179862  
Fax: 88-02-812377, 88-02-8125140
45. **The Good Earth**  
Hasney Tower (2<sup>nd</sup> floor)  
3/A Kawran Bazar C/A, Dhaka-1215  
Phone: 8121941, 9126652-54 Ext: 110  
Mobile: 01711-535544, 01711-959428  
Email: [info@thegoodearthbd.org](mailto:info@thegoodearthbd.org),  
[thegoodearth@yahoo.com](mailto:thegoodearth@yahoo.com)  
Web: [www.thegoodearthbd.org](http://www.thegoodearthbd.org)
46. **TMSS**  
TMSS Bhaban  
631/5, West Kazipara, Mirpur-10  
Dhaka-1216  
Phone : 8057589, Fax: 9009089  
Email: [tmsseshq@gmail.com](mailto:tmsseshq@gmail.com)

## Appendix III

### District-wise List of Partner Organizations

- Web: [www.tmss-bd.org](http://www.tmss-bd.org)
47. **UDDIPAN**  
9-10, Janata Cooperative Housing Society Limited, Road: I, Ring Road, Adabor Mohammadpur, Dhaka-1207.  
Phone: 8115459  
Email: [udpn@agni.com](mailto:udpn@agni.com)  
Web: [www.uddipanbd.org](http://www.uddipanbd.org)
48. **Underprivileged Children's Educational Programs (UCEP)**  
Plot-2 & 3, Mirpur-2, Dhaka-1216  
Phone : 8011014-6, Fax: 880-2-8016359  
Email: [ucep@citechco.net](mailto:ucep@citechco.net)  
Web: [www.ucepbd.org](http://www.ucepbd.org)
49. **Daridra Niroshan Prochesta (DNP)**  
Bhasanchar, Ambikapur  
District: Faridpur-7802.  
Phone : (0631) 62712, 01716-091808
- Gazipur District**
50. **Centre for Rehabilitation Education Earning Development (CREED)**  
**Mailing Address**  
329, West Dhanmondi, Dhaka-1209  
Mobile: 017116082288  
E-mail: [cred@dhaka.net](mailto:cred@dhaka.net)
- House: 80 (Ananda Dhara)  
(Hafizia Madrasa and Etimkthana Road)  
North Khaikur, Board Bazar, Gazipur-1704.
- Jamalpur District**
51. **PROGRESS**  
Dawanpara, Jamalpur-2000.  
Phone : (0981) 63116,  
Mobile: 01711346834  
Email: [progressmfi@yahoo.com](mailto:progressmfi@yahoo.com)
- Manikganj District**
52. **Association for Rural Advancement in Bangladesh (ARAB)**  
Bewtha Road, Manikganj Town  
Manikganj-1800,  
Phone : (0651)-61264, Fax: 880651-62086  
Mobile: 01552-313919, 01711-239839  
Email: [arab@bttb.net.bd](mailto:arab@bttb.net.bd)
53. **Grameen Seba Sangstha (GSS)**  
Village & Post: Betila, Manikganj  
Mobile : 01199-840193, 01715-186715
54. **Samaj Kallyan O Palli Unnayan Sangstha (SPUS)**
- Post: Rupsa, Thana: Shivalaya  
District: Manikganj.  
Phone : 065175049  
Mobile : 01715-438362
- Mymensingh District**
55. **Adarsha Samaj Seba Samity (ASSS)**  
House: 43, Faridapara Road (Shera)  
Dist: Mymensingh-2200.
56. **ASPADA Paribesh Unnayan Foundation**  
Shapna Kutir, House: 5/77, Bhaluka Paurashave, Mymensingh.  
Phone : (09022) 56268  
Mobile: 01713-031551  
Email: [aspadabd@dhaka.net](mailto:aspadabd@dhaka.net)
57. **Grameen Manobik Unnayan Sangstha (GRAMAUS)**  
5/1, Etakhula Road, Kachijuly, Mymensingh.  
Phone : 091-62993  
Mobile: 01713-503982, 01718-241147  
Email: [ngo-gramaus@yahoo.com](mailto:ngo-gramaus@yahoo.com)
58. **Parashmoni Samajik Unnayan Sangstha**  
Bogra Bazar, Village & Post:  
Gujium, Upazilla: Trishal  
District: Mymensingh  
Phone : 01716081274
- Rajbari District**
59. **Karmojibi Kallayan Sangstha (KKS)**  
House: 1, Road: 1, Beradanga, Rajbari  
Phone : 0641-65544  
Mobile : 01711-849340  
Email : [fagkks@bttb.net.bd](mailto:fagkks@bttb.net.bd)
- Shariatpur District**
60. **Naria Unnayan Samity**  
Post & Thana: Naria, Shariatpur-8020  
Phone : (0601) 59154  
Mobile: 01718239744  
Email: [nusa\\_bd@yahoo.com](mailto:nusa_bd@yahoo.com)
- Liaison Office**  
Plot: 30A, Road: 4, Sector-3  
Uttara Model Town, Dhaka-1230  
Phone : 8912840  
Mobile: 01819410913  
E-mail: [hridoy@bttb.net.bd](mailto:hridoy@bttb.net.bd)
61. **Samannita Unnayan Seba Sangathan (SUSS)**  
Sathi Cinema Hall Road, Madhupur, Tangail  
Phone: 09228-88127, 56326  
Mobile: 01711447028, 01718069189  
Email: [suss.bd@hotmail.com](mailto:suss.bd@hotmail.com)



## Appendix III

### District-wise List of Partner Organizations

62. **Society For Social Service (SSS)**  
Mymensingh Road, P.O Box No-10, Tangail.  
Phone : (0921) 53195, 53622  
Email: [ssstgl@btcl.net.bd](mailto:ssstgl@btcl.net.bd), [ssstgl@yahoo.com](mailto:ssstgl@yahoo.com)  
Web: [www.sssbangladesh.org](http://www.sssbangladesh.org)

#### **KHULNA DIVISION**

##### **Bagerhat District**

63. **Life Association**  
Vill: Badhal, PO: Badhal Bazar, Solarkala  
Upazila: Kachua, Bagerhat-9311  
Mobile: 01715-031522  
Email: [life\\_bagerhatbd@yahoo.com](mailto:life_bagerhatbd@yahoo.com)
64. **Village Development Foundation (VDF)**  
Upazila Parshad Road, Baraikhali,  
Morrelganj, Bagerhat  
Phone : 0465656008  
Mobile : 01715-548667  
Email: [amirvdf@gmail.com](mailto:amirvdf@gmail.com)

##### **Chuadanga District**

65. **Atmabiswas**  
Biswas Tower, Cinenia Hallpara  
Upazilla: Chuadanga Sadar  
District: Chuadanga-7200  
Phone : (0761) 63828  
Mobile: 01714-090402  
Email: [atmabiswas\\_ngo@yahoo.com](mailto:atmabiswas_ngo@yahoo.com)
66. **Jana Kallayan Sangstha (JKS)**  
Dowlathdair, Meherpur Road  
Chuadanga-7200  
Phone : (0761) 62797  
Mobile: 01712932103  
Email: [jksbangladesh@yahoo.com](mailto:jksbangladesh@yahoo.com)

##### **Jessore District**

67. **Ad-din Welfare Centre**  
15, Rail Road, Jessore-7400  
Phone: (0421) 68820.68804  
**Liaison Office**  
Ad-din Hospital, 2 Bara Maghbazar  
Dhaka-1217  
Phone : 9353391-3, 01711-532048  
Email: [addinoff@bttb.net.bd](mailto:addinoff@bttb.net.bd)
68. **Agragati**  
Village – Kakbandhal, Post – Sarutia  
P/S: Keshabpur, Jessore-7450  
Mobile :01711-361017
69. **Jagorani Chakra Foundation**  
46, Mujib Sarak, Jessore-7400  
Phone : (0421) 68823  
Email: [jcmfi@bttb.net.bd](mailto:jcmfi@bttb.net.bd), [jcmfi@gmail.com](mailto:jcmfi@gmail.com)  
Web: [www.jcfbd.org](http://www.jcfbd.org)

70. **Rural Reconstruction Foundation (RRF)**  
RRF Bhaban, C&B Road, Karbala  
Jessore-7400  
Phone: 0421-66906, 0421-65663, 0421-68457,  
Fax: 0421-68546  
Email: [rrc@btcl.net.bd](mailto:rrc@btcl.net.bd)  
Web: [www.rrf-bd.org](http://www.rrf-bd.org)

71. **Samadhan**  
Samadan Bhaban  
Upazilla Road, Keshabpur, Jessore-7450  
Phone : (04226) 56549, Mobile: 01711-131250  
Email: [samadhan\\_reazul@yahoo.com](mailto:samadhan_reazul@yahoo.com)

72. **SAVIOUR**  
104, Smith Road (Infront of DC Banglo)  
Jessore  
Phone: 0421-66622  
Mobile: 01712-040700, 01713-411120  
Email: [saviour@bttb.net.bd](mailto:saviour@bttb.net.bd)

73. **Srizony Bangladesh**  
Srizony Bhaban  
111, Pobahati Road, Jhenaidah-7300  
Phone : 0451-63264-5, Fax: 88-0451-63346  
Mobile: 01711217324  
**Liaison Office**  
Plot: 3, Road:1, Block: A, Section: 2  
Mirpur, Dhaka-1216  
Phone: 88-02-8016066  
Mobile: 01718031263, 01926888588  
E-mail: [info@srizonybd.org](mailto:info@srizonybd.org)

##### **Khulna District**

74. **Bangladesh Rural Integrated Development for Grabstreet Economy (BRIDGE)**  
House: 7, Road: 113  
Khalishpur Housing Estate, Khulna.  
Phone: (041) 760038, 02-9139420  
Email: [bridge@khulna.bangla.net](mailto:bridge@khulna.bangla.net)  
**Liaison Office**  
House: 591, Road: 10,  
Baitul Aman Housing Society  
Shyamoli, Dhaka-1207  
Email: [zbbali59@yahoo.com](mailto:zbbali59@yahoo.com)
75. **Nabolok Parisad**  
73 South Central Road, Khulna-9100  
Phone : (041) 720155, 810855  
Mobile: 01711-422678, 01711-840957  
Email: [nabolok@nabolokbd.org](mailto:nabolok@nabolokbd.org)
76. **Progati Samaj Kallayan Sangstha (PSKS)**  
Vill. + PO: Baruna Bazar  
Upazila: Dumuria, District: Khulna  
**Liaison Office:**  
Hospital Road, P.O: Noapara,  
Upazilla: Abhaynagar, District: Jessore.  
Phone: 04222-71423  
Mobile : 01714-662835, 01727-675300  
Email: [afzalpsskhulna@yahoo.com](mailto:afzalpsskhulna@yahoo.com)  
[progoti\\_khulna@yahoo.com](mailto:progoti_khulna@yahoo.com)

## Appendix III

### District-wise List of Partner Organizations

77. **Unnayan**  
House: 366, Road: 19, Nirala R/A  
Khulna-9100.  
Phone: (041) 732438  
Mobile: 01711389359, 01712001354  
Email: unnayanngo@yahoo.com

#### Kushtia District

78. **Action for Human Development Organization (AHDO)**  
House No: 546 (2<sup>nd</sup> Floor)  
Upazilla Road, Kushtia Sadar  
Dist: Kushtia  
Phone: 07023-75421  
Mobile: 01711-145338
79. **Kushtia Palli Unnayan Sangstha (KPUS)**  
18/5, 1 no Majidbari Lane, Arua para,  
Kushtia-7000.  
Phone : 071-62056, Mobile: 01711-310126  
Email: kpus\_bd@yahoo.com

80. **Sachasebi Palli Unnayan Sangstha "PIPASA"**  
41/30, Dadapur Road, Mongalbaria  
District: Kushtia  
Phone : 01716-078753  
Email: pipasakus@yahoo.com

#### Magura District

81. **ROVA Foundation**  
91/1, Stadium Para (West)  
District: Magura.  
Phone: 0488-63422, Mobile - 01711-807352  
E-mail: rovafoundation@yahoo.com

#### Meherpur District

82. **Daridra Bimochon Shangstha (DBS)**  
Fulbagan Road, Mukharjee Para  
Post & Thana: Meherpur, District: Meherpur  
Phone : (0791) 62629; Mobile- 01812907555  
E-mail: dbs@bttb.net.bd
83. **Satkhira Unnayan Sangstha (SUS)**  
Post & Thana: Tala, District: Satkhira,  
Phone: 01711-829492  
Email: sus\_ngo@yahoo.com
84. **Unnayan Prochesta**  
Village: Tala, Post: Tala, District: Satkhira.  
Mobile: 01711-451908  
Phone- 04727-56156;  
E-mail: unnpro07@gmail.com

#### **RAJSHAHI DIVISION**

#### Bogra District

85. **Focus Society**  
Hospital Road  
Gabtoli, Bogra.  
Phone: (05025)-75115  
Email: focus\_society@yahoo.com
86. **Noble Education and Literacy Society (NELS)**  
Sherpur Road, Banani  
District: Bogra-5800. Mobile: 01712-507633
87. **Taraf Sartaj Santi Sangha**  
Darail Bazar, Gabtoli  
District: Bogra  
Mobile- 01745-052709, 01711-466057

#### Chapainawabganj District

- Proyas Monobik Unnayan  
Society(PMUS)  
Belepukur, Chapai Nawabganj-6300  
Phone:0781-55075  
Email: Proyas@btcl.net.bd  
Proyas@gmail.com

#### Dinajpur District

89. **Al-Falah Aam Unnayan Sangstha (AFAUS)**  
Village & Post: Rajbati, Dinajpur Sadar  
Dinajpur.  
Phone : (0531) 65264  
Mobile : 01713-195200  
Email: afaus\_03@yahoo.com
90. **Mohila Bohumukhi Shikkha Kendra (MBSK)**  
Balu Bari, Dinajpur- 5200  
Phone: 0531- 64433  
Mobile: 01712639259  
E-mail: mbskcom@bttb.net.bd
91. **Polli Sree**  
Balubari, Dinajpur-5200.  
Phone : (0531) 65917, Mobile: 01713-491000  
Email: pollisree@yahoo.com  
**Liaison Office**  
6/4-A, Sir Syed Road, Mohammadpur  
Dhaka-1207

## Appendix III

### District-wise List of Partner Organizations

#### Jaipurhat District

92. **Ahead Social Organization (ASO)**  
Madrasha Road, District: Joypurhat-5900  
Phone: 0571-63569  
Mobile : 01711968797  
Email: [asojoy@bttb.net.bd](mailto:asojoy@bttb.net.bd)
93. **JAKAS Foundation**  
Sabujnagar, Joypurhat-5900  
Phone: 0571-62984  
Email: [jakasjoy@bttb.net.bd](mailto:jakasjoy@bttb.net.bd)
94. **Joypurhat Rural Development Movement (JRDM)**  
Hazi Badar Uddin Road, Professor Para  
District: Joypurhat  
Phone : (0571) 62038, 01715024164  
Email: [jrdmngo95@gmail.com](mailto:jrdmngo95@gmail.com)

#### Lalmonirhat District

95. **Nazir (Natun Jiban Gori)**  
Airport Road, Lalmonirhat- 5500  
Phone: 0591- 61252, 01715-572371  
Email: [nurul\\_nazir@hotmail.com](mailto:nurul_nazir@hotmail.com)

#### Naogaon District

96. **Barendrabhumi Samaj Unnayan Sangstha**  
Village: Mahinagar, Post: Sujail Hat  
Upazila: Mohadebpur  
District: Nowgoan.  
Mobile: 01711-883016, 01712021645  
Email: [bsdo\\_mohi@hotmail.com](mailto:bsdo_mohi@hotmail.com)

#### Natore District

97. **Access Towards Livelihood and Welfare Organisation (ALWO)**  
House # 81/2, Hazra, Natore-6400.  
Phone: 0771-61255  
Mobile: 01711-884298  
Email: [alwonat@yahoo.com](mailto:alwonat@yahoo.com)
98. **AVA DEVELOPMENT SOCIETY**  
Gopalpur, Lalpur, Natore  
Phone: 01711-453753  
Email: [ava\\_ngo@india.com](mailto:ava_ngo@india.com)

#### Pabna District

99. **Programme for Community Development (PCD)**  
Radhanagar Maktob More, Pabna.  
Phone : 0731-66969  
Mobile:01726-535081, 01711-484290.  
Email: [pcdpabna17@yahoo.com](mailto:pcdpabna17@yahoo.com)

#### Panchagarh District

100. **Anuvab**  
Thanapara Road  
Upazila: Boda, Panchagarh.  
Phone : (05653) 56180  
Mobile: 01712-676857
101. **Dristidan**  
Vill+Post+Upazila: Boda  
District: Panchagarh  
Phone : (05653) 56205, 01713-780570

#### Rajshahi District

102. **Association for Community Development-ACD**  
House- 41, Sagarpura, Rajshahi-6100.  
Phone : (0721)-770660  
Mobile : 01713098257; 01713098200  
E-mail: [rajacd@librabd.net](mailto:rajacd@librabd.net)
103. **Participatory Development Organisation (PDO)**  
Nawhata, Pabna, Rajshahi-6213  
Phone: 01711-318662, 01552-399332  
Email: [pdorai6213@yahoo.com](mailto:pdorai6213@yahoo.com)
104. **Sachetan**  
House# 573, Ramchandrapur  
Natore Road, Rajshahi-6100  
Phone: (0721) 771602,812560  
Mobile: 01713195400  
Email : [sachetan@bttb.net.bd](mailto:sachetan@bttb.net.bd) ,  
[sachetanraj@yahoo.com](mailto:sachetanraj@yahoo.com)
105. **Shapla Gram Unnayan Sangstha**  
Keshherhat, Mohanpur, Rajshahi  
Phone: 01712-772446  
Email: [shaplango\\_99@yahoo.com](mailto:shaplango_99@yahoo.com)

#### Rangpur District

106. **Rural Economic Support & Care for the under Previdged (RESCU)**  
H-40/1, Road-1, Alhaz Nagar, Dorshona  
Road, Ka rnicel College, Rangpur,  
Phone: 0521-64085  
Mobile: 01715-507394, 01715081476
107. **Samakal Samaj Unnayan Sangstha**  
Village+PO: Jahangirabad  
Upazila: Pirganj, Rangpur.  
Phone: 05227-56022  
Mobile: 01711-419045  
Email: [ssusinfo@gmail.com](mailto:ssusinfo@gmail.com)

## Appendix III

### District-wise List of Partner Organizations

#### Sirajganj District

108. **National Development Program (NDP)**  
NDP Bhaban, Bagbari, Shahid Nagar  
Kamarkhand, Sirajganj-6700.  
Phone: 0751-638870-71 (PABX)  
Mobile: 01713-383111  
Fax: 0751-63877  
E-mail: akhan\_ndp@yahoo.com

109. **Programmes for Peoples Development (PPD)**  
Vill: Shaktipur, PO+ PS: Shahzadpur  
Sirajganj-6770  
Phone: 07527-64352, 01711876760,  
01713-440200  
Email: ppd\_shahzadpur@yahoo.com

#### **SYLHET DIVISION**

#### Habiganj District

110. **Habiganj Unnayan Sangstha**  
House-18, Rajnagar, Woman's College Road  
Habiganj-3300  
Phone: 0831-62392,  
Mobile: 01715356837  
Email: hushabigani@yahoo.com

#### Moulvibazar District

111. **Posobid Unnayan Sangstha**  
Ahmed Vila, Uttara Residential Area, Moulvi  
Bazar Road, Srimangal, Moulvi Bazar  
Phone : (08626) 88311  
Mobile : 01711-899641

#### Sylhet District

112. **Voluntary Association for Rural Development (VARD)**  
House: 44, Road : 14, Block-B  
Shahjalal Upashahar  
Post Box : 170, Sylhet-3100.  
Phone : (0821) 761365, 761676, 761473  
*Lialson Office*  
Flat- 1/A, House # 554, Road# 9,  
Baitul Aman Housing society,  
Mohammadpur, Dhaka-1207.  
Phone : 9133590

\* As of 30 June 2009

## Dhaka University Institutional Repository

No	Ratios	Ratios	1	2	3	4
			Ad-din	AFAUS	Prodipan	PSKS
			2008-2009	2008-2009	2008-2009	2008-2009
1	TD	Total Debt (TD)	576,093,611	255,328,155	86003795	96762846
2	TE	Total Equity (TE)	73,390,242	27,813,677	2567498	7953748
3	CL	Current Liabilities	210,848,613	86,521,421	52044716	79096182
4	SOS	Savings Outstanding (SOS)	169,525,986	86,493,052	16823517	17011129
5	TA	Total Asset	649,483,853	283,141,832	88571293	104716594
6	LOS	Total Loan Outstanding (LOS)	417,572,970	200,214,249	58421924	79450495
7	FA	Fixed Asset	16,100,280	14,601,415	6962230	907929
8	CA	Curent Asset	633,383,573	268,540,417	81609063	103808665
9	OCA	Others Current Asset (OCA=CA-LOS)	215,810,603	68,326,168	23187139	24358170
10	ALO	Average Loan Outstanding (ALO)	382,627,954	180,303,214	55844460	69189182
11	APA	Average Performing Asset (Av. TAW)	588,827,021	242,112,364	75289507	92424606.5
12	TAWFA	Total Asset (Without Fixed asset)=CA	633,383,573	268,540,417	81609063	103808665
13	STD	STD	173229434	37664842	11927050	11616978
14	Tin	Total Income(TIn)	97,533,044	40,626,144	10109115	16331574
15	Oin	Others Income=(TIn-SC)	12,939,708	-1,700,621	2619949	1270546
16	Opln	Operational Income (Opln=TIn-Oin)	84,593,336	42,326,765	7489166	15061028
17	Nin	Net Income(NIn)	14,850,276	859,745	-2718177	1631981
18	SC	Service Charge realized(SC)	84,593,336	42,326,765	7489166	15061028
19	TC	Total Cost(TC)	82,682,768	39,766,399	12827292	14699593
20	OC	Operational Cost (OC=TC-FC-LLPFTP)	56,979,600	28,429,643	9717243	11271270
21	FC	FC=(SC to PKSF+ int on Savings)	20,211,956	7,103,220	1910049	2882647
22	IPtoPKSF	Interest payment to PKSF	13,110,639	4,082,050	1560249	2327126
23	Imp. Cost	Imputed Cost=(ir(NW-FA)+(ir-Int)con. Loan	3,963,073	1,501,939	138644.89	429502.392
24	ARFP	Amt Recovered For the period (ARFP)	693,196,968	356,868,396	64761071	124818374
25	ARUP	Amt Recoverable Up to the period (ARUP)	715,227,303	360,952,499	81030006	129975845
26	TAD	Total amt disbursed (TAD)	763,087,000	396,690,467	69916000	145341000
27	LLRP	Loan Loss Reserve Provision (LLRP)	24,458,579	6,068,670	16593151	5600090
28	LLR	Loan Loss Reserve (LLR)	25,188,535	6,598,294	-4089208	5600090
29	LLRP	Loan Loss Reserve Provision (LLRP) for th	5,491,212	4,233,536	1200000	545676
30	LOSwod	LOS with OD	413,617,544	198,263,158		78707565
31	TOD	Total Over due(TOD)	22,030,335	4,084,103	16268935	5157471
32	COD	Current Over Due(COD)	3,130,343	924,724	3887746	590206
33	AWO	Amt Written-Off	0	0	0	0

			Ad-din	AFAUS	Prodipan	PSKS
1	SR1	Response in disaster (SR1)	3	3	1	3
2	SR2	Internal control (SR2)	3	4	3	2
3	SR3	Interest rate (SR3)	3	4	3	3
4	SR4	Cash flow Proj.(SR4)	3	3	3	2
5	SR5	Over indebttness (SR5)	3	2	3	2
6	SR6	Ethical practices (SR6)	4	4	3	3
7	EX1	Progm. coverage (Ex1)	4	1	2	4
8	EX2	Efficiency (Ex2)	4	3	3	2
9	EX3	Insurance (Ex3)	4	3	3	3
10			4	4	3	1
11			4	4	4	3
12			4	4	2	2
13			3	4	3	1
14			3	3	3	2

## Dhaka University Institutional Repository

No	Ratios	5	6	7	8	9	10	11
		SJK	BASTAB	SACHETAN	GKT	CREED	AF	HELP
		2008-2009	2008-2009	2008-2009	2008-2009	2008-2009	2008-2009	2008-2009
1	TD	31647726	38674547	44967710	225733340	17652622	24488496.7	83126852
2	TE	913822	10348307	4002498	27836504	8999953	11717150	7322877
3	CL	5607726	22624548	18939371	54283343	9282622	46760548	54973517
4	SOS	5334745	16389902	10011701	41059863	6845795	39065229	13750675
5	TA	32561548	49022854	48970208	253569844	26652575	36205646.7	90449729
6	LOS	23086098	44512327	45922219	147307814	24074330	99811769	71311081
7	FA	114377	1015427	1050938	3079918	264468	5460985	750398
8	CA	32447171	48007427	47919270	250489926	26388107	30744661.7	89699331
9	OCA	9361073	3495100	1997051	103182112	2313777	-69067107	18388250
10	ALO	21564630	382627954	382627954	382627954	382627954	382627954	382627954
11	APA	27797534	242112364	242112364	242112364	242112364	242112364	242112364
12	TAWFA	32447171	48007427	47919270	250489926	26388107	30744661.7	89699331
13	STD	2680106	3013524	453398	32164801	1375646	14150847.3	4646974
14	Tin	3155235	9042988	10069782	5692	5053424	19387495	9366982
15	Oin	385705	241911	1445792	-17418864	183264	2052060	668714
16	Opln	2769530	8801077	8623990	17424556	4870160	17335435	8698268
17	Nin	558181	2047831	-8724787	-21586945	917869	-6019208	1365793
18	SC	2769530	8801077	8623990	17424556	4870160	17335435	8698268
19	TC	2597054	6995157	16794569	21592637	4135555	25406703	8001189
20	OC	1981348	5431893	8183681	722340	2786379	17686834	4922385
21	FC	615706	1388224	2258634	19395346	714581	1727177	2600582
22	IPtoPKSF	615706	438002	1897499	2246625	374955	363379	1764623
23	Imp. Cost	49346.388	558808.578	216134.892	1503171.22	485997.462	632726.1	395435.358
24	ARFP	22931063	70669250	73203964	223815463	36505773	135220336	76671648
25	ARUP	23992172	71395551	81251414	226355974	38523147	160734858	79055039
26	TAD	25974000	83794000	76318000	281633000	40242000	156039000	82288500
27	LLRP	885881	1149218	7654247	3083239	2043811	22176029	2279485
28	LLR	955947	1001456	7470602	3083239	2182088	22176029	2260509
29	LLRP	0	175040	6352254	1474951	634595	5992692	478222
30	LOSwod	22865848	769412	8182810	4198760	2486270	30497314	4266862
31	TOD	1061109	726301	8047450	2540511	2017374	25514522	2383391
32	COD	776027	72378	1242084	1551440	370835	6976249	1577083
33	AWO	0	0	0	5692	89461	0	0

		SJK	BASTAB	SACHETAN	GKT	CREED	AF	HELP
1	SR1	3	4	3	3	2	3	4
2	SR2	3	1	2	1	2	3	4
3	SR3	4	4	3	3	3	3	4
4	SR4	3	2	3	3	2	3	4
5	SR5	4	2	3	3	2	3	4
6	SR6	4	4	3	3	2	3	4
7	EX1	3	1	3	1	2	3	3
8	EX2	3	2	2	3	2	3	4
9	EX3	3	2	1	3	2	3	3
10		4	4	3	4	2	4	4
11		4	4	4	3	2	3	4
12		4	4	4	4	2	4	4
13		3	1	1	1	2	1	4
14		3	2	3	3	2	3	4

## Dhaka University Institutional Repository

No	Ratios	12	13	14	15	16	17	18
		MUK	ROVA	NABOLOK	BSDO	ATMABISWA	VARD	NELS
		2008-2009	2008-2009	2008-2009	2008-2009	2008-2009	2008-2009	2008-2009
1	TD	106048315	45293803	103278971	35345024	145653156	231416964	18598040
2	TE	23712078	1409176	6261505	8776204	21363531	16148785	1095942
3	CL	92335815	22324379	36438971	20145024	95688385	143795516	12348040
4	SOS	60096474	9235416	22926705	8988499	33688225	65011679	3145492
5	TA	129760393	46702979	109540476	44121228	167016687	247565749	19693982
6	LOS	91821382	35289822	83694124	34803450	125932076	193006334	14588175
7	FA	3126811	2061135	214833	149658	3273313	16472020	189280
8	CA	126633582	44641844	109325643	43971570	163743374	231093729	19504702
9	OCA	34812200	9352022	25631519	9168120	37811298	38087395	4916527
10	ALO	382627954	382627954	382627954	382627954	382627954	382627954	382627954
11	APA	242112364	242112364	242112364	242112364	242112364	242112364	242112364
12	TAWFA	126633582	44641844	109325643	43971570	163743374	231093729	19504702
13	STD	24985309	2348940	17202235	5258849	29348203	26320912	1977977
14	Tin	22389794	6041851	18502284	6040901	32811133	42306986	2696829
15	Oin	411128	3860621	2751905	664676	2582940	-447725212	161541
16	Opln	21978666	2181230	15750379	5376225	30228193	490032198	2535288
17	Nin	4772815	-4112228	16361184	3008476	5797640	-2142841	-211183
18	SC	21978666	2181230	15750379	5376225	30228193	490032198	2535288
19	TC	17616979	10154079	2141100	3032425	27013493	44449827	2908012
20	OC	12143546	5141275	-8254305	1926685	18289885	30278898	2042520
21	FC	5048679	675623	4066798	992560	6249576	8643935	482612
22	IPtoPKSF	2151096	378245	3026143	723737	5138460	8643935	422619
23	Imp. Cost	1280452.21	76095.504	338121.27	473915.016	1153630.67	872034.39	59180.868
24	ARFP	165074007	19608740	126547147	52424260	244780929	237157301	19704236
25	ARUP	166903125	22595622	137081896	53091150	250775063	278221626	20661415
26	TAD	169509000	21663000	125267000	67688500	247755000	246065800	24324000
27	LLRP	272114672	3089631	10669759	929054	4335908	28353335	848118
28	LLR	2678172	3163913	10884509	929054	4323143	4830000	848118
29	LLRP	424754	4337181	6328607	113180	2474032	5526994	382880
30	LOSwod	2618520	25014925	12403909	1815535	5994134	92357263	1420894
31	TOD	1829118.1	2986882	10534749	666890	5994134	41064325	957179
32	COD	148945.1	401418	1219981	169570	4663946	22404361	387252
33	AWO	0	0	0	0	0	0	0

		MUK	ROVA	NABOLOK	BSDO	ATMABISWA	VARD	NELS
1	SR1	1	2	3	1	3	4	2
2	SR2	2	2	1	2	1	3	1
3	SR3	2	2	3	3	4	4	3
4	SR4	2	1	3	2	3	3	3
5	SR5	1	1	1	2	2	4	2
6	SR6	1	2	4	3	4	4	3
7	EX1	1	1	1	1	1	1	1
8	EX2	1	1	2	2	2	3	2
9	EX3	1	1	1	1	4	4	3
10		2	3	4	3	4	4	4
11		2	2	3	3	4	4	4
12		2	3	4	4	3	4	4
13		1	1	2	3	1	1	3
14		2	1	3	2	3	3	3

## Dhaka University Institutional Repository

No	Ratios	19	20	21	22	23	24	25
		SSUS	DRISTIDAN	ASUK	PDO	MBSK	TSSS	PMUS
		2008-2009	2008-2009	2008-2009	2008-2009	2008-2009	2008-2009	2008-2009
1	TD	16971966	7647413	4858882	4428619	66911323	5513607	88725159
2	TE	2896398	1447617	2114766	643418	37414221	596390	7408603
3	CL	4821966	2477459	3058598	2648619	49461950	3433607	57091831
4	SOS	3672707	2117459	1689648	1228240	27262085	1351310	20800974
5	TA	19868364	9095030	6973648	5072037	104325544	6109997	96133762
6	LOS	13966923	6178297	3865225	4309600	69822139	5541989	71586985
7	FA	416930	776608	18624	212368	2243594	98435	1732529
8	CA	19451434	8318422	6955024	4859669	102081950	6011562	94401233
9	OCA	5484511	2140125	3089799	550069	32259811	469573	22814248
10	ALO	382627954	382627954	382627954	382627954	382627954	382627954	382627954
11	APA	242112364	242112364	242112364	242112364	242112364	242112364	242112364
12	TAWFA	19451434	8318422	6955024	4859669	102081950	6011562	94401233
13	STD	2407230	498472	2293280	45000	20919697	388454	9851677
14	Tin	2858311	1366017	1115119	753042	15922354	1058945	17436481
15	Oin	131106	7845	187267	35498	1164529	13152	2061931
16	Opln	2727205	1358172	927852	717544	14757825	1045793	15374550
17	Nin	306067	-147449	-194289	53421	5704111	27395	1808045
18	SC	2727205	1358172	927852	717544	14757825	1045793	15374550
19	TC	2552244	1513466	1309408	699621	10218243	1031550	15628436
20	OC	1724370	1186900	784134	592238	8514483	777113	12465265
21	FC	480677	232834	208871	60315	1563854	174437	2769402
22	IPtoPKSF	366891	132751	138037	20250	591750	139502	2012653
23	Imp. Cost	156405.492	78171.318	114197.364	34744.572	2020367.93	32205.06	400064.562
24	ARFP	22041727	10865295	7421025	5733586	117886456	8365024	138225686
25	ARUP	22815398	12484060	8512384	5768630	121997130	9036387	141365512
26	TAD	25380000	10006000	6391000	8467000	139395000	10343000	155126683
27	LLRP	838815	931670	1136011	58651	4885037	488108	2763503
28	LLR	994104	248365	1273099	47068	5369155	190297	2764899
29	LLRP	347197	93732	316403	47068	139906	80000	393769
30	LOSwod	2451142	1618765	280946	35044	5037840	671363	70902513
31	TOD	773671	1618765	1091359	35044	4110674	671363	3139826
32	COD	145733	945677	330548	35044	417466	359934	1508534
33	AWO	0	0	0	0	0	0	0

		SSUS	DRISTIDAN	ASUK	PDO	MBSK	TSSS	PMUS
1	SR1	3	3	2	3	1	2	4
2	SR2	2	1	1	3	2	1	1
3	SR3	3	4	3	3	1	3	4
4	SR4	3	1	2	3	1	1	1
5	SR5	3	3	2	2	2	1	3
6	SR6	3	4	2	3	1	2	4
7	EX1	1	1	1	1	1	1	1
8	EX2	3	1	2	3	2	2	3
9	EX3	4	4	3	4	1	2	3
10		4	3	3	4	1	3	4
11		3	3	2	3	1	3	4
12		4	3	3	4	1	4	4
13		1	1	2	4	2	1	1
14		3	1	2	4	2	1	3



## Dhaka University Institutional Repository

No	Ratios	26	27	28	29	30	31	32
		DORP	SUS	AHDO	ACD	SAPB	JRDM	ARCHES
		2008-2009	2008-2009	2008-2009	2008-2009	2008-2009	2008-2009	2008-2009
1	TD	43684382	72392933	60627705	39991997	188859184	213580744	62611100
2	TE	29613438	17116417	5714246	3633858	24688032	25528414	2400778
3	CL	43684382	43492933	40689443	9726750	122479871	133487425	20771100
4	SOS	15752973	18733606	12381351	9726750	40136061	40993357	15595687
5	TA	73297820	89509350	66341951	43625855	213547216	239109158	65011878
6	LOS	55204031	71722083	51245681	32740228	176459139	185338575	49384604
7	FA	532226	1058282	1187663	146784	1438303	6136914	5113382
8	CA	72765594	88451068	65154288	43479071	212108913	232972244	59898496
9	OCA	17561563	16728985	13908607	10738843	35649774	47633669	10513892
10	ALO	382627954	382627954	382627954	382627954	382627954	382627954	382627954
11	APA	242112364	242112364	242112364	242112363.5	242112364	242112363.5	242112364
12	TAWFA	72765594	88451068	65154288	43479071	212108913	232972244	59898496
13	STD	9471773	13667796	4827204	4572447	14655345	25177005	7751669
14	Tin	10793290	15972879	9121251	6587835	31475238	49000428	12977267
15	Oin	1630185	-128255909	645581	261012	31475238	4548620	765331
16	Opln	9163105	144228788	8475670	6326823	0	44451808	12211936
17	Nin	2816004	670419	1306451	231585	172940	6955746	12977267
18	SC	9163105	144228788	8475670	6326823		44451808	12211936
19	TC	7977286	15302460	7814800	6356250	31302298	42044682	
20	OC	5275744	7568491	5153895	4277395	24244498	28677438	-4736894
21	FC	2091001	4590778	1714601	1215045		9014555	3030662
22	IPtoPKSF	1595127	3459483	1227330	838375		7394944	2356562
23	Imp. Cost	1599125.65	924286.518	308569.284	196228.332	1333153.73	1378534.356	129642.01
24	ARFP	74793618	115145090	68279176	50650968	156964467	409744338	-1.06E+08
25	ARUP	80585260	122466370	70404250	53191632	166064842	424096442	-1.01E+08
26	TAD	91005000	112805000	93784000	64041000	178163527	438129000	113010000
27	LLRP	2522774	6555271	1183028	2004588	6406606	10121253	4227351
28	LLR	2717193	6555271	1217553	2004588	6593187	11172748	4227351
29	LLRP	610541	3143191	946304	863810	7057800	4352689	1706232
30	LOS <sub>w</sub> OD	5791642	7321280	2125074	2540664	70044397	14352104	5079241
31	TOD	5791642	7321280	2125074	2540664	9100375	14352104	5079241
32	COD	4805326	2266058	1748738	1352177	6060657	7940559	2047058
33	AWO	0	0	0	0	0	0	0

		DORP	SUS	AHDO	ACD	SAPB	JRDM	ARCHES
1	SR1	4	1	3	4	4	4	4
2	SR2	2	1	2	3	3	1	1
3	SR3	3	1	4	4	3	4	4
4	SR4	1	2	3	3	2	1	3
5	SR5	2	1	2	2	3	4	3
6	SR6	2	2	2	4	2	4	4
7	EX1	1	1	2	1	1	1	1
8	EX2	1	1	2	3	3	4	3
9	EX3	3	2	2	1	3	4	4
10		4	2	3	4	4	4	4
11		3	2	4	3	3	4	4
12		4	1	4	2	4	4	4
13		1	1	1	3	1	4	1
14		2	1	2	3	3	4	3

## Dhaka University Institutional Repository

No	Ratios	33	34	35	36	37	38	39
		JF	CEDAR	ASO	NEF	DBS	GUP	KPUS
		2008-2009	2008-2009	2008-2009	2008-2009	2008-2009	2008-2009	2008-2009
1	TD	379509399	86277698	66400157	41749142	126648525	94863747	55362932.5
2	TE	48425233	23996629	6982282	6020386	35879445	16574983	7629480.5
3	CL	251666065	68677698	48866823	8759142	27788525	43092749	14134808
4	SOS	59909528	29955112	10685396	8429142	21627558	35025110	14022348
5	TA	427934632	110274327	73382439	47769528	162527970	111438730	62992413
6	LOS	271680661	70490487	52789495	30347187	133074533	89957302	43256691
7	FA	14914850	999533	1165333	1453905	5432914	7811374	3019064
8	CA	413019782	109274794	72217106	46315623	157095056	103627356	59973349
9	OCA	141339121	38784307	19427611	15968436	24020523	13670054	16716658
10	ALO	382627954	382627954	382627954	382627954	382627954	382627954	382627954
11	APA	242112364	242112364	242112364	242112364	242112364	242112364	242112364
12	TAWFA	413019782	109274794	72217106	46315623	157095056	103627356	59973349
13	STD	56695774	31347807	6065714	4422505	15426643	10866095	8978969
14	Tin	73878111	20322617	11759712	6921489	29557933	16915758	10851836
15	Oin	10435213	3905585	3173333	912161	1907096	966152	881855
16	Opin	63442898	16417032	0	6009328	27650837	15949606	9969981
17	Nin	19939452	0	900661	967107	8549601	-410128	1144783
18	SC	63442898	16417032	8586379	6009328	27650837	15949606	9969981
19	TC	53938659	20322617	10859051	5954382	21008332	17325886	9707053
20	OC	46478628	13592544	7715512	4931461	15747753	11620285	7425404
21	FC	6286304	3262900	2030503	1022921	4675116	3459981	2169122
22	IPtoPKSF	9390345	1958877	2030503	780861	3926700	1991571	1667507
23	Imp. Cost	2614962.58	1295817.97	377043.228	325100.844	1937490.03	895049.082	411991.947
24	ARFP	558307909	129341824	98123981	50292040	219478769	149064935	83739843
25	ARUP	559226478	139699234	99432429	51580929	219975206	167542567	85648578
26	TAD	619690000	124869000	107457000	60167000	255094000	132385000	90687000
27	LLRP	7688893	11351019	1813156	1570853	1815585	10938247	2360302
28	LLR	7688892	10784765	1813156	1818711	1815585	3999687	2360302
29	LLRP	1173727	3467173	1113036	0	585463	2245620	112527
30	LOS <sub>w</sub> OD	6600118	12259384	2318658	1296600	663677	26512738	4926873
31	TOD	918569	10357410	1308448	1288889	496437	18477632	1908735
32	COD	-3039506	1510127	373640	32204	110515	10705172	478149
33	AWO	0	0	0	0	0	0	0

		JF	CEDAR	ASO	NEF	DBS	GUP	KPUS
1	SR1	4	1	3	3	2	4	4
2	SR2	3	1	3	2	1	3	2
3	SR3	4	3	4	3	3	3	4
4	SR4	4	1	3	2	2	2	3
5	SR5	2	1	1	2	2	2	4
6	SR6	3	2	3	2	2	3	4
7	EX1	3	2	3	2	1	2	2
8	EX2	3	2	3	2	2	2	3
9	EX3	3	2	3	2	3	3	3
10		2	3	4	3	4	4	4
11		4	2	3	3	3	3	4
12		2	3	4	3	4	4	4
13		1	3	3	2	3	2	3
14		2	1	3	2	2	3	4

## Dhaka University Institutional Repository

No	Ratios	40	41	42	43	44	45	46
		NUSA	JKS	BEDO	BERDO	CODEC	ALWO	MAMATA
		2008-2009	2008-2009	2008-2009	2008-2009	2008-2009	2008-2009	2008-2009
1	TD	190179013	119155693	161098940	8231710	35456928	12073110	7552728
2	TE	18924504	13690989	12452670	4353023	13732791	1253967	1873412
3	CL	53568450	24505693	40788519	3931710	11196928	3673110	4472299
4	SOS	40247957	22414147	33407148	3486460	11196928	3374687	16836
5	TA	209103517	132846682	173551610	12584733	49189719	13327077	9426140
6	LOS	152679010	100752384	136296071	8360144	40828367	12840562	8792941
7	FA	4941374	1559020	5104715	2123740	0	198523	45969
8	CA	204162143	131287662	168446895	10460993	49189719	13128554	9380171
9	OCA	51483133	30535278	32150824	2100849	8361352	287992	587230
10	ALO	382627954	382627954	382627954	382627954	382627954	382627954	382627954
11	APA	242112364	242112364	242112364	242112364	242112364	242112364	242112364
12	TAWFA	204162143	131287662	168446895	10460993	49189719	13128554	9380171
13	STD	47693924	12677212	16591945	770197	2300000	70000	400000
14	Tin	31217901	20122873	30983947	1646294	6830225	1433068	18161260
15	Oin	2227305	1675828	8020832	61226	939578	17728	16564921
16	Opln	28990596	18447045	22963115	1585068	5890647	1415340	1596339
17	Nin	6741827	4143379	2044700	-180122	-8432871	-6980080	17188602
18	SC	28990596	18447045	22963115	1585068	5890647	1415340	1596339
19	TC	24476074	15979494	28939247	1826416	15263096	8413148	972658
20	OC	16956857	12057865	20247598	1528418	11004284	1369095	757667
21	FC	5415387	3558255	5591514	191928	616198	303076	204567
22	IPtoPKSF	3933321	2710764	4185992	62775	323326	93488	3375
23	Imp. Cost	1021923.22	739313.406	672444.18	235063.242	741570.714	67714.218	101164.248
24	ARFP	242122071	145695828	218451070	7538627	49869969	11413814	16695653
25	ARUP	251873420	146181349	222525667	7714779	55809033	18986273	16729973
26	TAD	257296000	180092000	258605000	9720000	51473000	11180000	18513000
27	LLRP	10769707	1447126	5096477	224706	5993585	7114816	121906
28	LLR	10784644	1474519	5138243	224706	6584857	6798449	100000
29	LLRP	2103830	363374	3100135	106070	3642614	6740977	10424
30	LOSwod	147564100	2042150	7175369	3246911	38931639	7572459	34320
31	TOD	9751349	485521	4074587	176152	5939064	7572459	34320
32	COD	3542819	226018	1179621	6444	797626	-6798449	0
33	AWO	0	0	0	0	0	0	0

		NUSA	JKS	BEDO	BERDO	CODEC	ALWO	MAMATA
1	SR1	2	3	4	3	4	1	3
2	SR2	2	2	1	3	4	2	3
3	SR3	3	3	3	2	4	3	3
4	SR4	1	2	1	3	4	3	2
5	SR5	2	2	2	2	3	3	2
6	SR6	2	2	2	3	4	3	3
7	EX1	1	1	1	3	4	3	2
8	EX2	2	3	2	3	4	3	2
9	EX3	3	3	1	3	4	3	3
10		3	4	4	3	4	3	3
11		3	3	3	2	4	4	4
12		4	3	4	4	4	4	3
13		3	1	1	2	4	2	2
14		3	2	2	3	4	3	2

## Dhaka University Institutional Repository

No	Ratios	47	48	49	50	51	52	53
		MUKTI	SUS	SRIZONY	SOJAG	BRIDGE	SPUS	HATAPHOC
		2008-2009	2008-2009	2008-2009	2008-2009	2008-2009	2008-2009	2008-2009
1	TD	90046293	106677206	190763125	-26899607	55446718	37868742	46039196
2	TE	7823278	28121517	33641369	254446978	16147925	-2964619	5218218
3	CL	66995710	82887206	97361290	54529888	26246437	21871667	14199946
4	SOS	29109223	44712470	52375451	48041389	20524134	6369778	11907574
5	TA	97869571	134798723	224404494	227547371	71594643	34904123	51257414
6	LOS	81186251	105071528	174093293	145185673	63694719	30188338	41108155
7	FA	0	5706030	10342929	18428113	3181699	1361304	1142779
8	CA	97869571	129092693	214061565	209119258	68412944	33542819	50114635
9	OCA	16683320	24021165	39968272	63933585	4718225	3354481	9006480
10	ALO	382627954	382627954	382627954	382627954	382627954	382627954	382627954
11	APA	242112364	242112364	242112363.5	242112364	242112364	242112364	242112364
12	TAWFA	97869571	129092693	214061565	209119258	68412944	33542819	50114635
13	STD	11736258	15383020	43295815	25975226	3553447	2771185	4983161
14	Tin	170250601	23310022	39676723	45562407	10658861	4924152	9976990
15	Oin	154225119	801303	4176739	2896666	2086681	441256	767310
16	OpIn	16025482	22508719	35499984	42665741	8572180	4482896	9209680
17	Nin	155567783	1876899	-1833111.16	7057617	438185	-2684567	2704352
18	SC	16025482	22508719	35499984	42665741	8572180	4482896	9209680
19	TC	14682818	21433123	41509834.16	38504790	10220676	7608719	7272638
20	OC	10176883	17970716	31599759.5	21545676	8225412	2721869	5144184
21	FC	3938511	3462407	5612711.66	15431202	1095264	1312019	1856454
22	IPtoPKSF	2536717	1728475	4493791.66	13551114	412200	1160068	1398520
23	Imp. Cost	422457.012	1518561.92	1816633.926	13740136.8	871987.95	-160089.426	281783.77
24	ARFP	129249019	160722126	-290155912	521364797	35988293	41795831	-67019772
25	ARUP	131809190	183454790	-267848189	523730792	39258394	56555846	-66748660
26	TAD	141388836	172914000	303136345	519034000	45507457	42057000	77736480
27	LLRP	3311381	3284315.57	26352733	2864178	3270101	12216559	656905
28	LLR	3377818	2428557	30257649	4743904	3769658	8598220	644537
29	LLRP	567424		4297363	1527912	900000	3574831	272000
30	LOSwOD	22748606	3966611	-1281150809	2365995	39330511	28640015	1350507
31	TOD	2560171	22732664	22307723	2365995	3270101	14760015	271112
32	COD	971698	20818024	1691467	1307002	669949	4308772	55579
33	AWO	0	0	0	0	0	0	0

		MUKTI	SUS	SRIZONY	SOJAG	BRIDGE	SPUS	HATAPHOC
1	SR1	4	2	1	1	2	2	3
2	SR2	3	1	4	2	1	3	3
3	SR3	2	2	3	3	2	3	4
4	SR4	4	3	4	1	2	2	4
5	SR5	3	1	4	2	1	2	3
6	SR6	4	1	3	2	2	3	4
7	EX1	2	1	3	3	1	2	2
8	EX2	4	1	4	2	1	3	3
9	EX3	3	1	3	3	2	3	4
10		4	1	4	2	3	3	4
11		3	2	4	2	2	3	4
12		2	3	4	1	3	4	4
13		4	2	4	2	2	2	3
14		4	1	4	2	2	2	3

## Dhaka University Institutional Repository

No	Ratios	54	55	56	57	58	59	60
		SUSS	DAM	EWf	ARAB	ANTAR	CMES	GSS
		2008-2009	2008-2009	2008-2009	2008-2009	2008-2009	2008-2009	2008-2009
1	TD	33003949	127166055	59843230	141021800.8	32631668	62133107	8783518
2	TE	10669515	54843861	1439950	38908825.23	2128906	42626526	1727647
3	CL	11453960	73648387	13899636	39555134	11521669	34161741	3769696
4	SOS	8247355	53066051	49125795	28791672	9493132	30091867	2268555
5	TA	43673464	182009916	61283180	179930626	34760574	104759633	10511165
6	LOS	30032932	164522890	49125795	94704048	28275510	81219435	7549433
7	FA		634593	1409725	6831183	512550	82582	363284
8	CA	43673464	181375323	59873455	173099443	34248024	104677051	10147881
9	OCA	13640532	16852433	10747660	78395395	5972514	23457616	2598448
10	ALO	382627954	382627954	382627954	382627954	382627954	382627954	382627954
11	APA	242112364	242112364	242112364	242112363.5	242112364	242112364	242112364
12	TAWFA	43673464	181375323	59873455	173099443	34248024	104677051	10147881
13	STD	8275499	7102113	3550099	50197000	3827867	16190935	2170330
14	Tin	7393198	31232340	7509564	23848797	6816857	17141079	1308112
15	Oin	1301834	1320654	2408370	3542060	601212	1729511	82355
16	Opln	6091364	29911686	5101194	20306737	6215645	15411568	1225757
17	Nin	-2215960	-10748691	-1106251	5213895	525333	5971308	118972
18	SC	6091364	29911686	5101194	20306737	6215645	15411568	1225757
19	TC	9609158	41981031	8615815	18634902	6291524	11169771	1189140
20	OC	7033081	38228520	7294410	11717994	4307391	7597707	796493
21	FC	1188444	3627748	1321405	5282890	1156740	1522750	170259
22	IPtoPKSF	838109	1656251	980888	4114947	1046284	780187	128249
23	Imp. Cost	576153.81	2961568.49	77757.3	2101076.562	114960.924	2301832.4	93292.938
24	ARFP	52021367	240076449	46034308	130503686	107785374	124272550	9806037
25	ARUP	58986468	270073103	58456884	141329439	109241290	132222521	10762549
26	TAD	46895000	262425800	59162000	134740000	120504000	143380000	13111000
27	LLRP	7085169	22751107	13071796	6308592	1477092	6198565	1032261
28	LLR	7085169	23513756	13071798	6308002	1487624	6198565	499072
29	LLRP	1387633	124763	0	1634018	827393	2049314	222388
30	LOSwod	21280824	29996654	13494678	10825753	1455916	13401000	7549433
31	TOD	6965101	29996654	12422576	10825753	1455916	7949971	956512
32	COD	435522	124763	214735	8269974	557079	4014014	38008
33	AWO	0	0	0	0	0	0	0

		SUSS	DAM	EWf	ARAB	ANTAR	CMES	GSS
1	SR1	4	3	3	2	4	3	1
2	SR2	1	1	1	2	2	4	4
3	SR3	4	4	3	4	4	4	1
4	SR4	1	1	1	1	2	3	1
5	SR5	2	1	3	2	3	2	1
6	SR6	4	1	3	2	4	1	1
7	EX1	1	1	3	2	1	4	4
8	EX2	1	1	3	2	2	3	4
9	EX3	4	3	3	2	3	4	4
10		4	1	3	2	4	2	1
11		1	2	3	3	4	3	2
12		4	1	3	2	1	2	2
13		1	1	1	1	1	3	1
14		1	1	3	4	3	4	4

## Dhaka University Institutional Repository

No	Ratios	61	62	63	64	65	66	67
		AFID	PSFB	HOPE	GK	SGUS	POLLI	AGRAGATI
		2008-2009	2008-2009	2008-2009	2008-2009	2008-2009	2008-2009	2008-2009
1	TD	17616382	23501986	10374735	39377731	19946526	95406181	10089888
2	TE	5196326	33588948	741904	1664199	2287992	20927756	2067074
3	CL	10959946	6171875	7792473	7565000	4865265	63606176	5649888
4	SOS	5663682	4613893	2755068	8860653	162658	22237502	3190788
5	TA	22812708	57090934	11116639	41041930	22234518	116333937	12156962
6	LOS	16860255	16286678	9571471	26426437	16519719	81681316	8523414
7	FA	1794814	39052127	111556	396645	731600	2637843	549454
8	CA	21017894	18038807	11005083	40645285	21502918	113696094	11607508
9	OCA	4157639	1752129	1433612	14218848	4983199	32014778	3084094
10	ALO	382627954	382627954	382627954	382627954	382627954	382627954	382627954
11	APA	242112364	242112364	242112363.5	242112363.5	242112363.5	242112363.5	242112364
12	TAWFA	21017894	18038807	11005083	40645285	21502918	113696094	11607508
13	STD	4157639	1242523	707334	1791125	1650473	19940000	2505714
14	Tin	3791324	43029102	109832	-352296	3427258	16215353	1741313
15	Oin	389652	40141603	-1430998	-4187721	385822	2293599	304896
16	Opln	3401672	2887499	1540830	3835425	3041436	13921754	1436417
17	Nin	1443317	35411955	-1357097	-4872186	929891	-606796	-514149
18	SC	3401672	2887499	1540830	3835425	3041436	13921754	1436417
19	TC	2348007	7617147	1466929	4519890	2497367	16822149	2255462
20	OC	1570472	7018880	755563	2428992	1905530	11154931	1591752
21	FC	677189	515151	221566	557958	520455	3272286	251238
22	IPtoPKSF	412537	351000	99226	377529	308351	2124111	144450
23	Imp. Cost	280601.604	1813803.19	40062.816	89866.746	123551.568	1130098.824	111621.996
24	ARFP	20052705	23390296	12529414	2174778	25187904	119554166	11534615
25	ARUP	20335877	23390296	12940667	4639744	25187904	126491183	12980522
26	TAD	24828000	31484000	17638000	2595000	32549934	144164000	12145000
27	LLRP	345239	94522	506791	2439212	165197	8225586	1526849
28	LLR	362369	83116	489800	1532940	165197	8225587	1591486
29	LLRP	100346	83116	489800	1532940	71382	2394932	412472
30	LOSwod	1701270	436500	523679	25664864	0	12451798	1537265
31	TOD	283172	0	411253	2464966	0	6937017	1445907
32	COD	163587	0	93351	377061	0	1602711	29464
33	AWO	0	0	0	0	0	0	0

		AFID	PSFB	HOPE	GK	SGUS	POLLI	AGRAGATI
1	SR1	4	3	1	2	1	3	3
2	SR2	2	2	1	1	2	1	3
3	SR3	4	3	3	3	3	3	3
4	SR4	3	2	2	3	2	2	2
5	SR5	2	2	2	2	3	3	2
6	SR6	2	2	2	3	2	2	3
7	EX1	1	1	1	1	1	1	2
8	EX2	2	2	1	2	3	3	2
9	EX3	4	2	2	3	1	3	3
10		4	3	4	4	4	4	3
11		4	2	3	4	3	3	3
12		4	2	1	4	4	4	3
13		3	2	1	2	2	1	2
14		2	2	2	3	2	2	2

## Dhaka University Institutional Repository

No	Ratios	68	69	70	71	72	73	74
		SAMADHAN	GE	UCEP	NDP	FDSR	HFSKS	SPUP
		2008-2009	2008-2009	2008-2009	2008-2009	2008-2009	2008-2009	2008-2009
1	TD	98051135	30314581	10085022	244813164	4355744	114795274	78868068
2	TE	6532287	2467167	2990749	46634759	977215	3542052	2072744
3	CL	19691135	19808735	3121622	171584631	3535744	54773114	39983909
4	SOS	14630044	8418209	921223	62291401	1634441	25490864	17630190
5	TA	104583422	32781748	13075771	291447923	5332959	118337326	80940812
6	LOS	80614322	27607151	10877620	216602366	4418657	82478652	64684367
7	FA	977654	766958	0	11279967	72516	2453274	3407988
8	CA	103605768	32014790	13075771	280167956	5260443	115884052	77532824
9	OCA	22991446	4407639	2198151	63565590	841786	33405400	12848457
10	ALO	382627954	382627954	382627954	382627954	382627954	382627954	382627954
11	APA	242112363.5	242112364	242112364	242112363.5	242112364	242112363.5	242112363.5
12	TAWFA	103605768	32014790	13075771	280167956	5260443	115884052	77532824
13	STD	14969252	2939907	784000	44634191	674786	15041925	10072123
14	Tin	13580798	5724792	1601773	49641084	1163048	14208777	7765599
15	Oin	1292356	525075	73083	7238040	65616	-998560	667373
16	Opln	12288442	5199717	1528690	42403044	1097432	15207337	7098226
17	Nin	3574945	1459660	1106625	9761170	102866	-2660110	-1947180
18	SC	12288442	5199717	1528690	42403044	1097432	15207337	7098226
19	TC	10005853	4265132	495148	39879914	1060182	16868887	9712779
20	OC	6516608	3202501	36788	29803323	848080	14686699	7457953
21	FC	2750919	818822	66600	7970730	212102		2223078
22	IPtoPKSF	2101072	633607	66600	5306174	127691	1739497	2223078
23	Imp. Cost	352743.498	133227.018	161500.446	2518276.986	52769.61	191270.808	111928.176
24	ARFP	99496421	41611488	867131	-249622771	-8864991	123191678	58036642
25	ARUP	102715065	42317038	11553579	-246203335	-8469654	129388996	122721009
26	TAD	132115000	51925000	10365000	293596000	8988000	122595742	34740000
27	LLRP	3985778	896442	929101	5618931	431686	26620138	26620138
28	LLR	3985781	880599	929103	6246547	428494	5944608	5944608
29	LLRP	738326	243809	391760	2105861	0	2182188	31748
30	LOSwod	4166883	1487496	2561176	4258877	395431	7159768	44776426
31	TOD	3218644	705550	10686448	3419436	395337	6197318	64684367
32	COD	633001	456165	10081328	337075	4089	3174967	47413722
33	AWO	0	0	0	18448	0	0	0

		SAMADHAN	GE	UCEP	NDP	FDSR	HFSKS	SPUP
1	SR1	3	3	2	3	3	1	4
2	SR2	2	3	2	3	3	1	3
3	SR3	3	3	2	3	4	4	4
4	SR4	2	3	2	3	3	3	3
5	SR5	2	3	2	3	2	4	3
6	SR6	3	3	2	1	3	4	3
7	EX1	2	3	2	4	1	1	3
8	EX2	2	3	2	3	3	3	3
9	EX3	3	4	1	3	3	1	3
10		4	4	2	4	2	4	4
11		3	3	2	4	3	4	3
12		4	4	2	4	3	1	4
13		2	1	2	3	3	1	3
14		3	3	1	4	4	3	3

## Dhaka University Institutional Repository

No	Ratios	75	76	77	78	79	80	81
		ENDEAVOUR 2008-2009	VDF 2008-2009	DDJ 2008-2009	CARSA 2008-2009	DISA 2008-2009	SAVIOUR 2008-2009	GRAMAUS 2008-2009
1	TD	14905629	48071784	312862727	80628586	148563281	5374513	152276270
2	TE	2625124	2053113	38556003	12796359	12309510	215616	9976684
3	CL	17991917	10690742	84929399	23063545	106496620	3954513	98760622
4	SOS	7898205	9997738	3225	1659398	43401137	1335049	37281245
5	TA	17530753	50124897	351418730	93424945	160872791	5590129	162252954
6	LOS	28255781	42809662	250976744	72690623	123684384	4482919	128148033
7	FA	3859316	1917865	7998401	655481	1527865	499913	1981337
8	CA	13671437	48207032	343420329	92769464	159344926	5090216	160271617
9	OCA	-14584344	5397370	92443585	20078841	35660542	607297	32123584
10	ALO	382627954	382627954	382627954	382627954	382627954	382627954	382627954
11	APA	242112363.5	242112364	242112363.5	242112364	242112364	242112364	242112364
12	TAWFA	13671437	48207032	343420329	92769464	159344926	5090216	160271617
13	STD	3192251	3480766	38204407	10653253	30660092	607297	16473790
14	Tin	5926202	4499827	47519428	15038049	25641190	1018108	26890049
15	Oin	784297	100505	4012002	1152351	1644521	39672	2436065
16	Opln	5141905	4399322	43507426	13885698	23996669	978436	24453984
17	Nin	-83572	145372	7291430	13630	6522608	-331071	3981017
18	SC	5141905	4399322	43507426	13885698	23996669	978436	24453984
19	TC	6009774	4354455	40227998	15024419	19118582	1349179	22909032
20	OC	3897476	3406407	38284420	9677380	14880632	1041353	18352885
21	FC	1157019	751495		2535591	3729659	200777	3607565
22	IPtoPKSF	948954	715770	5813804	1624687	2650013	148887	3607565
23	Imp. Cost	141756.696	110868.102	2082024.162	691003.386	664713.54	11643.264	538740.936
24	ARFP	41642390	40315791	384032396		201748528	7837479	196992437
25	ARUP	43271683	42151611	395375581	10209486	202251469	7971046	202353774
26	TAD	49292000	49907000	415291500		256751000	8114000	232901000
27	LLRP	1200037	410844	7320408	5239517	1588043	157979	3500995
28	LLR	1200037	491543	7320408	5212361	1900699	157979	4039926
29	LLRP	955279	196553	1943578	2811448	508291	107049	948582
30	LOSwod	1907529	10904337	14343185	10209486	2195884	387506	5361337
31	TOD	1629293	1835820	11343185	10209486	502941	133567	5361337
32	COD	1357274	1835820	8795702	8362265	342358	41354	-1037345
33	AWO	0	0	0	0	0	0	0

		ENDEAVOUR	VDF	DDJ	CARSA	DISA	SAVIOUR	GRAMAUS
1	SR1	3	4	3	3	3	3	2
2	SR2	1	3	3	3	1	3	2
3	SR3	4	4	3	3	3	4	2
4	SR4	1	3	2	3	1	4	2
5	SR5	2	4	2	2	2	2	1
6	SR6	3	4	3	3	2	2	2
7	EX1	1	1	2	3	2	4	2
8	EX2	4	3	2	3	2	3	2
9	EX3	4	3	3	3	2	4	1
10		3	4	3	4	1	3	2
11		3	4	3	3	2	3	2
12		3	4	4	4	2	4	2
13		1	3	2	1	1	3	2
14		1	3	2	3	2	1	2



## Dhaka University Institutional Repository

No	Ratios	82	83	7	85	86	87	88
		PBK	Unnayan	BEES	DNP	PIPASA	PROGRESS	ASPADA
		2008-2009	2008-2009	2008-2009	2008-2009	2008-2009	2008-2009	2008-2009
1	TD	201744796	84661239	634974892	4353261	49582912	122687120	383516263
2	TE	11408654	22631579	64617870	454435	5151777	7228630	69511593
3	CL	124128129	54761239	439288929	3653261	12271618	33035672	129832951
4	SOS	70250356	30024258	129940895	1273800	11620864	32056952	110289
5	TA	213153450	107292818	699592762	4807696	54734689	129915750	453027856
6	LOS	167602852	88425897	518305005	2604319	42830406	99720575	357096858
7	FA	8861923	1379545	32826460	384761	830314	3874181	31013812
8	CA	204291527	105913273	666786302	4422935	53904375	126041569	422014044
9	OCA	36688675	17487376	148461297	1818616	11073969	26320994	64917186
10	ALO	382627954	87239527.5	491712910	382627954	382627954	382627954	382627954
11	APA	242112363.5	103488359	627278868	242112364	242112364	242112363.5	242112363.5
12	TAWFA	204291527	105913273	666786302	4422935	53904375	126041569	422014044
13	STD	4666441	17487377	53214228	1751888	8009610	17920564	34905569
14	Tin	36036374	20293107	105541208	1136549	8781462	21732220	85050140
15	Oin	2065174	2286827	6915309	11050	683389	3246818	5159235
16	Opln	33971200	18006280	98625899	1125499	8098073	18485402	79890905
17	Nin	0	3369917	-26730095	-447920	-362065	-1106647	18172763
18	SC	33971200	18006280	98625899	1125499	8098073	18485402	79890905
19	TC	36036374	16923190	132271303	1584469	9143527	22838867	66877377
20	OC	26994331	8858029	110144610	1452106	-1508680	16220270	52634610
21	FC		3563860	18519965	132363	9652207	3707843	14241938
22	IPtoPKSF	3536181	2161688	10969097	73800	9143527	2456310	10241979
23	Imp. Cost	616067.316	1222105.27	3489364.98	24539.49	278195.958	390346.02	3753626.022
24	ARFP	277431144	144051310	887843603	7458724	780317	184309231	663011438
25	ARUP	305883167	154063734	960799389	8616609	4977149	199307455	664125278
26	TAD	297799320	142253200	850772000	4379000	841193	204127526	734669459
27	LLRP	29673664	11560832	74408308	1016265	4813233	11252151	3631418
28	LLR	24257879	11622451	11421451	1393667	2002758	8474786	3670627
29	LLRP	9042043	4501301	3606728	0	1000000	2910754	829
30	LOSwod	13178925	74087679	513985780	1576936	8480359	14998224	517118
31	TOD	28452023	10012424	72955786	1157885	4196832	14998224	1113840
32	COD	2727347	2374998	12822226	371859	1000328	6644247	1113840
33	AWO	0	0	0	0	0	0	0

		PBK	Unnayan	BEES	DNP	PIPASA	PROGRESS	ASPADA
1	SR1	2	3	3	1	3	2	1
2	SR2	2	1	2	1	3	1	3
3	SR3	3	3	3	4	3	1	4
4	SR4	3	2	3	3	2	2	4
5	SR5	2	2	3	1	2	2	3
6	SR6	1	2	3	1	3	3	4
7	EX1	1	1	2	3	2	1	4
8	EX2	2	2	2	1	2	2	4
9	EX3	1	2	3	3	3	3	3
10		2	4	4	4	4	4	4
11		2	3	3	4	3	4	4
12		2	3	4	1	4	4	3
13		2	1	1	1	2	2	3
14		3	3	3	3	2	2	4

## Dhaka University Institutional Repository

No	Ratios	89	90	91	92	93	94	95
		HUS	PUS	RESCU	DUS	KKS	PCD	NAZIR
		2008-2009	2008-2009	2008-2009	2008-2009	2008-2009	2008-2009	2008-2009
1	TD	44523289	14425607	9823001	106767452	7899729	94508974	-317153
2	TE	5223505	8048650	420615	15532992	5569546	20072919	1497305
3	CL	17531624	9867736	3863001	77308457	12813452	65984494	3187153
4	SOS	14410154	2479481	2949191	26166913	7853930	19112489	2973257
5	TA	49746794	22474257	10243616	122300444	13469275	114581893	1180152
6	LOS	39388412	19340275	3728339	83001389	24984581	85315914	6461220
7	FA	322991	953203	90923	10716608	8204478	2995952	234972
8	CA	49423803	21521054	10152693	111583836	5264797	111585941	945180
9	OCA	10035391	2180779	6424354	28582447	-19719784	26270027	-5516040
10	ALO	382627954	382627954	382627954	382627954	382627954	382627954	382627954
11	APA	242112364	242112364	242112363.5	242112363.5	242112364	242112364	242112364
12	TAWFA	49423803	21521054	10152693	111583836	5264797	111585941	945180
13	STD	5604328	2180779	2359834	15580008	5586654	17247698	367000
14	Tin	8778290	778060	1749900	24803204	6551704	18989039	1404817
15	Oin	517333	263996	250651	5266127	917501	1966008	84033
16	Opin	8260957	514064	1499249	19537077	5634203	17023031	1320784
17	Nin	2310031	-268624	-194277	3799162	-853426	-21082421	-174742
18	SC	8260957	514064	1499249	19537077	5634203	17023031	1320784
19	TC	6468259	1046684	1944177	21004042	7405130	40071460	1579559
20	OC	4002909	931235	1324045	17441713	4818379	31782812	1514559
21	FC	1388759	115449	420132	3523088	1413790	2807626	
22	IPtoPKSF	1028101	92336	303164	2603130	1049755	2232080	66475
23	Imp. Cost	282069.27	434627.1	22713.21	838781.568	300755.484	1083937.63	80854.47
24	ARFP	19478993	3748128	11792055	162369406	48305946	148772032	8568565
25	ARUP	22399113	4838071	12948758	167573527	54901084	160264900	8568565
26	TAD	31399000	1816000	12090000	154383000	41696000	155018000	9098000
27	LLRP	1506075	827618	716484	6243236	4217830	10414222	64612
28	LLR	1506101	1486374	586052	6243236	4217829	10414206	65000
29	LLRP	1076591	0	200000	39241	1172961	5481022	65000
30	LOSwod	1521719	15913225	-1308009	7584964	7390653	11492568	0
31	TOD	2920120	1089943	1156703	5204121	6595138	11492868	0
32	COD	2345551	532205	142233	960668	3591415	-8275751	0
33	AWO	0	0	0	0	0	0	0

		HUS	PUS	RESCU	DUS	KKS	PCD	NAZIR
1	SR1	4	2	3	1	4	1	2
2	SR2	3	1	1	1	3	1	3
3	SR3	4	3	3	3	4	3	3
4	SR4	3	2	3	2	3	2	2
5	SR5	1	3	3	2	3	3	3
6	SR6	4	2	3	2	2	3	3
7	EX1	3	2	1	1	3	3	2
8	EX2	3	3	3	1	3	1	2
9	EX3	3	3	3	2	3	3	3
10		4	2	2	2	4	3	4
11		3	3	3	2	4	4	3
12		4	3	3	1	4	2	4
13		2	1	1	1	3	1	2
14		3	3	1	1	3	1	3

## Dhaka University Institutional Repository

No	Ratios	96	97	98	99	100	101
		LA	PPD	FS	GKF	ST	AVA
		2008-2009	2008-2009	2008-2009	2008-2009	2008-2009	2008-2009
1	TD	8665587	70358787	29043364	99742794	327600992	39982369
2	TE	1645408	49685105	2264703	9127524	21268657	1511196
3	CL	3085587	58958786	7543858	48596969	61864326	6673369
4	SOS	1687685	10500000	6905738	40564618	40043877	5913836
5	TA	10310995	120043892	31308067	108870318	348869649	41493565
6	LOS	7049815	97397326	25709002	76596334	296773564	32495957
7	FA	290926	3100961	294782	0	3884262	481187
8	CA	10020069	116942931	31013285	108870318	344985387	41012378
9	OCA	2970254	19545605	5304283	32273984	48211823	8516421
10	ALO	382627954	382627954	382627954	382627954	382627954	382627954
11	APA	242112363.5	242112364	242112363.5	242112364	242112363.5	242112363.5
12	TAWFA	10020069	116942931	31013285	108870318	344985387	41012378
13	STD	2402352	12350000	2484002	2949545	26444655	1885000
14	Tin	1124936	27006442	5148528	14908798	42810698	6040590
15	Oin	221913	1855336	225059	325240	1898935	5308161
16	Opln	903023	25151106	4923469	14583558	40911763	732429
17	Nin	137222	10318876	831565	4298187	4784186	482613
18	SC	903023	25151106	4923469	14583558	40911763	732429
19	TC	987714	16687566	4316963	10610611	38026512	5557977
20	OC	813641	12043381	3314773	5870746	30298843	4562419
21	FC	174073	3819941	874868	4251352	7322669	908293
22	IPtoPKSF	143916	1832230	599344	2370000	5995714	732429
23	Imp. Cost	88852.032	2682995.67	122293.962	492886.296	1148507.478	81604.584
24	ARFP	7739347	198125206	42153706	130122558	343702411	45859663
25	ARUP	9286850	199830776	42294107	134130983	415304058	46684174
26	TAD	10414000	198476000	50015000	147555700	374916000	62548000
27	LLRP	1602526	2419668	315101	2204435	28293853	437740
28	LLR	722588	2561413	315894	1118050	10799389	271247
29	LLRP	0	824244	127322	488513	405000	87265
30	LOSwod	1547503	1705570	140401	4008425	71601647	824511
31	TOD	1547503	1705570	140401	4008425	71601647	824511
32	COD	0	503009	100275	3824682	59565392	740511
33	AWO	0	0		0	0	0

		LA	PPD	FS	GKF	ST	AVA
1	SR1	2	2	2	2	1	4
2	SR2	1	1	2	2	3	2
3	SR3	4	3	3	3	2	3
4	SR4	2	1	2	1	1	2
5	SR5	3	2	3	2	2	3
6	SR6	3	2	3	3	2	2
7	EX1	1	1	2	2	1	3
8		2	3	2	1	1	2
9	EX3	3	1	2	3	1	3
10		2	2	3	3	1	4
11		3	2	3	3	2	2
12		3	2	4	3	1	3
13		2	3	2	2	1	2
14		2	3	3	2	2	2

## Dhaka University Institutional Repository

No	Ratios	102	103	104	105	106	107
		ANUVAB	SANGRAM	UP	TMSS	RRF	SSS
		2008-2009	2008-2009	2008-2009	2008-2009	2008-2009	2008-2009
1	TD	5537042	445876676	38692285	2980712170	1100304527	3277273073
2	TE	-2130546	26100471	4141225	777150406	140150555	326628529
3	CL	4583867	262816679	15172088	2235749216	656582528	2367707577
4	SOS	388918	74778957	9964283	1140411320	217840749	835782989
5	TA	3406496	471977147	42833510	3757862576	1240455082	3603901602
6	LOS	2483664	374865667	34084972	3049870000	919772374	2546632308
7	FA	690880	17605704	344278	131081756	19089185	80136279
8	CA	2715616	454371443	42489232	3626780820	1221365897	3523765323
9	OCA	231952	79505776	8404260	576910820	301593523	977133015
10	ALO	382627954	382627954	31745515	2898075983	852101456.5	2217663707
11	APA	242112364	242112363.5	40147371	3460615822	1123582718	3125437741
12	TAWFA	2715616	454371443	42489232	3626780820	1221365897	3523765323
13	STD	20000	39413841	60025551	98374686	97845411	582168892
14	Tin	251996	61127417	7055638	721570217	209038222	662416491
15	Oin	2190	5252340	920796	31569184	22662640	107761726
16	Opln	249806	55875077	6134842	690001033	186375582	554654765
17	Nin	-2133088	9909133	-1321878	39180854	-17206026	86516637
18	SC	249806	55875077	6134842	690001033	186375582	554654765
19	TC	2385084	51218284	8377516	682389363	226244248	575899854
20	OC	160550	28954924	3992913	543477212	168656497	421547638
21	FC	164794	8158820	1390599	94300110	24682211	112622942
22	IPtoPKSF	158200	6208451	933068	58369325	24682211	81569926
23	Imp. Cost	-115049.484	1409425.434	223626.15	41966121.92	7568129.97	17637940.57
24	ARFP	1989577	498884932	50999086	878102611	1674628550	4952353811
25	ARUP	4095159	569493781	54689743	971430023	1803455973	5043874150
26	TAD	1539000	491162000	55678000	5949793600	1674628550	5603677551
27	LLRP	2039740	21987553	4599722	120416149	53315928	110205252
28	LLR	2059740	21995912	4759744	131287536	53715862	116504892
29	LLRP	2059740	14104540	2994004	44612041	32905540	41729274
30	LOSwod	2116071	70608849		126811726	235454656	138981490
31	TOD	2105582	70608849	3690657	93327412	128827423	91520339
32	COD	173795	62564042	1090029	12336249	106627233	22271282
33	AWO	0	0	0	0	2680600	0

		ANUVAB	SANGRAM	UP	TMSS	RRF	SSS
1	SR1	1	1	3	3	1	3
2	SR2	2	1	3	3	4	3
3	SR3	3	4	4	4	1	4
4	SR4	2	1	3	3	1	3
5	SR5	2	2	3	3	4	3
6	SR6	2	2	3	3	1	3
7	EX1	1	1	3	3	4	3
8	EX2	2	3	3	3	4	3
9	EX3	1	1	3	3	4	3
10		3	1	4	4	2	4
11		3	1	3	3	2	3
12		4	1	4	4	2	4
13		3	1	3	3	4	3
14		2	3	3	3	4	3

## Dhaka University Institutional Repository

No	Ratios	108	109	110	111	112
		Uddipan 2008-2009	Swanirvar 2008-2009	JCF 2008-2009	ASA 2008-2009	BRAC 2008-2009
1	TD	1792767645	123543557	2239876231	16251350320	38104843028
2	TE	168806488	13919988	249165722	18841163818	8286675322
3	CL	538650029	74743557	1652579523	2013708183	16130030570
4	SOS	518564623	25530799	519144447	321630517	14849643533
5	TA	1961574133	137463545	2489041953	35092514138	46391518350
6	LOS	1534879284	118099744	1647783754	30929474225	40314579778
7	FA	23606995	816781	21154728	708003468	1213719459
8	CA	1937967138	136646764	2467887225	34384510670	45177798891
9	OCA	403087854	18547020	820103471	3455036445	4863219113
10	ALO	1280106178	113823477.5	1532384196	29159715680	35116024620
11	APA	1629072546	131187281	2349324412	34384510670	45177798891
12	TAWFA	1937967138	136646764	2467887225	34384510670	45177798891
13	STD	150600000	11861824	9244850	0	1925941977
14	Tin	313471714	17269356	417230365	6688969437	9475229737
15	Oin	25572053	3704983	60340969	400305960	547731342
16	OpIn	287899661	13564373	356889396	6288663477	8927498395
17	Nin	6464893	1414424	42876252	2433908505	297798245
18	SC	287899661	13564373	356889396	6288663477	8927498395
19	TC	307006821	15854932	374354113	4255060932	9177431492
20	OC	230279965	12066047	228681511	3652234695	7426570074
21	FC	56231741	3683885	95707253	132546378	476172175
22	IPtoPKSF	38764169	2909342	59885285	23054731	23054731
23	Imp. Cost	9115550.352	751679.352	13454948.99	1017422846	447480467.4
24	ARFP	2415117587	118235467	2798662169	60549708151	72548653180
25	ARUP	2457512648	136375779	3003956802	60887701248	73156296544
26	TAD	2924663800	126788000	3027555000	61108526100	75149411850
27	LLRP	43684288	12989516	184682416	1092498509	322570762
28	LLR	43726454	14285664	180815592	1095940574	193652500
29	LLRP	20495115	105000	49965349	470279859	1274689243
30	LOS <sub>w</sub> OD	63947814	35489367	205386133	32021972734	5009488744
31	TOD	42395061	18140312	205294633	337993097	607643364
32	COD	22493485	9834769	57089673	1263749230	356465860
33	AWO	0	0	0	146842768	14670094

		Uddipan	Swanirvar	JCF	ASA	BRAC
1	SR1	4	1	2	4	5
2	SR2	3	1	4	5	5
3	SR3	3	3	1	5	5
4	SR4	1	3	1	5	5
5	SR5	2	3	1	5	5
6	SR6	3	3	1	5	5
7	EX1	2	2	4	5	5
8	EX2	2	3	4	5	5
9	EX3	2	3	4	5	5
10		4	3	2	4	5
11		3	3	2	5	5
12		4	3	2	5	5
13		3	2	4	3	2
14		3	2	4	3	3

### **PKSF's Operational Activities**

PKSF comprises six core programs, eight projects and five special programs, amounting to nineteen activities. Core programs are the driving force behind PKSF's expansion and growth. They include rural microcredit (RMC), urban microcredit (UMC), microenterprise program (ME), ultra poor program (UPP), agriculture sector microcredit (ASM), and seasonal loan (SL).

The eight projects are Learning and Innovation Fund to Test New Ideas (LIFT), Program Initiatives for Monga Eradication (PRIME), Microfinance and Technical Support (MFTS), Microfinance for Marginal and Small Farmers (MFMSF), Second Participatory Livestock Development Project (PLDP-II), Disaster Management Fund (DMF), Livelihood Restoration Program (LRP), and Emergency 2007 Flood Restoration and Recovery Assistance Program (EFRRAP).

PKSF's Special Programs consist of five programs, namely Special Assistance for Housing of SIDR-affected Borrowers (SAHOS), Rehabilitation of SIDR-affected Coastal Fishery, Small Business & Livestock Enterprises (RESCUE), Microfinance Support Intervention for Food Security for Vulnerable Group Development (FSVGD) and Ultra Poor (UP) Beneficiaries program, Rehabilitation of Non-Motorized Transport Pullers and Poor Owners (RNPPPO), and Financial Services for the Overseas Employment of the Ultra Poor (FSOEUP).

### **Features of Credit Activities**

PKSF provides loans to three categories of POs – Organizations Operating in Small Areas (OOSA); Big Partner Organizations Operating in Large Areas (BIPOOL); and Pre-PKSF POs.

- a. PKSF charges 4.5% service charge per year to OOSA and Pre-PKSF category POs and 7% service charge per year to its BIPOOL category POs.
- b. Loans received by OOSA and Pre-PKSF category POs from PKSF are repayable within a period of 3 years. First 6 months are considered as a grace period and loans along with service charge are to be repaid in 10 quarterly installments within the rest 30 months.
- c. Loans received by BIPOOL category POs are payable in 4 years in 12 equal installments with a grace period of 12 months.
- d. The maximum and minimum loan refund is flexible in some programs.

### **Selection Process of POs**

Under this process PKSF appraises various types of non-government, semi-government and government organizations, voluntary agencies, societies and local government bodies to select these as POs which have gained experience and expertise or which have the potentials to operate a successful microcredit program for self-employment and income generation of the landless and asset less. In appraising an organization, PKSF follows a clear guideline which can be divided into the following areas: (1) Organization; (2) Organizer; (3) Management; (4) Good governance; (5) Human Resources; (6) Working Area; (7) Field Activities; (8) Past performance; (9) Management Information System (MIS) and (10) Accounting System.

### **Provisional Policy for Debt Management Reserve (DMR) of PKSF**

Paili Karma-Sahayak Foundation has formulated a 'Provisional Policy for Debt Management Reserve'. Later, on the basis of detailed analysis of loan repayment of the POs and the experiences of the present system, the Policy may be revised and again will be presented before the Board of Directors of PKSF.

The Provisional Policy for DMR is as follows:

1. The main objective to make provision for DMR will be to keep the Loan Recovery Rate of PKSF at 100%, which may fall due to the default of loan and to create a fund for probable future risky loan. The POs of PKSF can be classified in the following four categories in this respect.
  - a) POs under BIPOOL.
  - b) Good POs under OOSA: The POs whose loan recovery rate at the field level is 95%+and whose institutional capacity is satisfactory according to the performance indicators.
  - c) Potentially good POs under OOSA: The new POs whose institutional capacity is not yet up to the satisfactory level but these POs may have the potentials. Foundation is also extending support to increase their institutional capacity along with provision of loan fund to these POs.
  - d) POs under OOSA whose performance is not satisfactory: The POs whose performance is not satisfactory according to the performance indicators and whose loan recovery rate is below 95%. PKSF has taken the decision to stop further financing of the POs and recover the overdue loan due to the Foundation.
2. On the basis of the above, against the outstanding of loan at the end of a financial year under BIPOOL and the good and potentially good POs under OOSA as mentioned in 1(b) and 1(c), 2% should be kept as provision in DMR plus the amount equal to the overdue of loan at the end of a financial year for the POs as stated in 1(d) to be kept as provision for DMR.

**Policy for Creating Debt Management Reserve for PKSF**

1. Regular Current Loan

Creation of Debt Management Reserve is Not Required.

2. Doubtful Loan

- i) Irregular current loan: Creation of 'Debt Management Reserve' is not required. Identifying irregular current loan in time and taking immediate action for turning irregular current loan into regular current loan should be the right policy in this regard.
- ii) Delayed Loan: 50% Debt Management Reserve has to be created against Delayed Loan. In the example cited in section 5.2.3, 50% reserve against the outstanding loan amount of Tk. 200 has to be created. That means the amount of Debt Management Reserve will be Tk.100 (50% of Tk. 200).

3. Bad Loan

100% Debt Management Reserve has to be created against bad loan. In the example of section e.3.2, 100% reserve has to be created against outstanding loan amount of Tk. 50. This means the amount of Debt Management Reserve will be Tk. 50 (100% of Tk. 50).

a) *Example for Determining "Debt Management Reserve"*

Suppose, on 30-6-97 the PO's

amount of delayed loan - Tk. 10,000/-

amount of Bad loan - Tk. 5,000/-

In this case, on 30/6/97 the PO has to create Debt Management Reserve of-

50% against delayed loan + 100% against bad loan = 50% x 10000 + 100% x 5000

= 5000 + 5000 = Tk. 10000

b) *The Source for creating "Debt Management Reserve"*

Ideally the source of Debt Management Reserve of an PO will be the service charge earned by it. For the PO, the service charge earning is the main source for meeting administrative expenses, creation of debt management reserve, payment of return on group savings and service charge to PKSF.

c) *The policy to maintain "Debt Management Reserve"*

- i) The PO will create 50% and 100% reserves for delayed loan and bad loan respectively at the end of the financial year (July of current year to June of next year). If required the amount of actual reserve will be increased or decreased from the estimated debt management reserve.
- ii) The debt management reserve will be deposited in a separate account with a scheduled bank (savings account/fixed deposit).
- iii) The relevant accounts will be kept by the PO under the head of "Debt Management Reserve" in the General Ledger through journal vouchers.



- iii) To replenish the deficit in core fund due to unrealized loan, fund from "Debt Management Reserve" may be used, if necessary, by a PO for investment in its microcredit program.

### Rating System of PKSf

*(A) Indicators of First Level:*

Sl. No.		weight	Acquired score
1	Viability of micro Credit Borrowers	2.0	
2.1	Program placement	2.0	
2.2(A)	Group management	2.0	
2.2(B)	Loan disbursement and recovery system	2.0	
2.2(C)	Level of skills of field workers	2.0	
2.2(D)	Efficiency of accountant	1.0	
2.2(E)	Quality of chief executive	2.0	
2.2(F)	Skill of mid and top level Managers	2.0	
2.5(A)	Sound governance	2.0	
2.5(B)	Incentive base for management staff & employees	1.0	
2.6(A)	MIS	2.0	
2.6(B)	Accounting system	1.0	
2.6(D)	Regular internal supervision	1.0	
2.7	Status of physical assets	1.0	
3(A)	Financial sustainability	2.0	
3(B)	Quality of portfolio	2.0	
3(C)	Productivity ratios	1.0	
3(D)	Status of micro credit fund of the PO	1.0	
3(E)	Financial ratio analysis	1.0	
	<i>Total</i>	<i>30.0</i>	

Grade Point Average (GPA) = Total Score ÷ 30 =

*(B) Indicators of Second Level:*

Sl. No.		weight	Acquired score
2.3	Human resource development program	2	
2.4	Monitoring & Evaluation	1	
2.6(C)	Internal audit	2	
2.6(E)	Budgetary practice	1	
	<i>Total</i>	6	

GPA = Total Score ÷ 6 =

2.0) In order to be capable of getting financed from PKSF remaining in the present category, a PO should score as follows in the 'First and Second Levels' of Indicators.

Category	Number of Members	Desired GPA (Grade Point Average) in the Frame of First Level of Indicators	Desired GPA in the frame of Second Level of Indicators
E	400 - 1,500 (+500)	2.5+	2.00+
D	1,500 - 5,000 (+1000)	2.7+	2.20+
C	5,000 –10,000 (+1000)	2.9+	2.50+
B	10,000 – 15,000 (+1000)	3.0+	2.80+
A	15,000 - 60,000	3.2+	3.00+

3.0) For moving in the next higher category, a 'Partner Organization' should score as follows in the First and Second levels of Indicators.

Category	Desired GPA in the First level of Indicator	Desired GPA in the Second Level of Indicators
From E to D	2.70+	2.20+
From D to C	2.90+	2.50+
From C to B	3.00+	2.80+
From B to A	3.20+	3.00+

Name	Description	Methodology	Grades
<b>PKSF</b> ( <a href="http://www.pksf.org">www.pksf.org</a> )	Composite rating system which is developed based on the requirement of PKSF for funding its POs giving emphasis on financial as well as program information. It has the limitations of a universal approach.	In order to be capable of getting financed from PKSF remaining in the present category, a PO should score as follows in the 'First and Second Levels' of Indicators. In the first level financial and program performance and in the second level HRD, M&E, budgeting and auditing practice performance are measured	A; B; C; D; E
<b>Accion International</b> ( <a href="http://www.accion.org">www.accion.org</a> )	Non-for-profit network of MFIs based in USA. It has assessed 56 MFIs in Latin America, Africa, CEE (Central and Eastern Europe)/NIS (Newly Independent States) and South Asia.	It has adapted the CAMEL rating methodology to perform global risk assessments of MFIs. The CAMEL methodology assesses 21 indicators under 5 areas: Capital adequacy, Asset quality, Management, Earnings and Liquidity management.	AAA; AA; A; BBB; BB; B; CCC; CC; C; DDD; DD; D
<b>Mixmarket</b> ( <a href="http://www.mixmarket.org">www.mixmarket.org</a> )	A Net work for micro credit information exchange within Asia assisted by the ADB to promote MC .	Nine variables selected for ranking MFIs and based on nine variables nine individual lists are developed based on borrowers outreach depositors outreach, scale, market penetration growth, profitability efficiency productivity and portfolio quality.	Nine list of Top 100 MFIs based on nine variables
<b>CGAP</b> (Waterfield and Ransing 1998)	This system measure a list of indicators based on the need of the manager of the MFIs. These indicators again grouped into six major type.	The first group is portfolio quality indicators measure the portfolio at risk , loan loss reserve ratio, loan write-off ratio, and loan rescheduling ratio. The second group is profitability indicators. The third group is financial solvency indicators, the fourth group is growth indicators, The fifth group is productivity indicators and last group is outreach indicators.	
<b>World Council's of Credit Union</b> ( <a href="http://www.wccu.org">www.wccu.org</a> )	PEARLS provides credit union managers with concise, easy-to-read reports that reveal institutional weaknesses and trends. It also offers a strategic business planning tool to help managers implement change.	Each letter in the word PEARLS measures the key areas of credit union operations: Protection, Effective financial structure, Asset quality, Rates of return and costs, and Liquidity and Signs of growth.	
<b>Planet Rating</b> ( <a href="http://www.planetfinance.org">www.planetfinance.org</a> )	French non-for-profit organization. It has developed the GIRAFE methodology. So far it has analysed 78 MFIs of Africa, Latin America, East Asia, CEE /NIS and MENA (Middle East and North Africa).	GIRAFE means Governance and decision making process, Information and management tools, Risk analysis and control, Assets including loan portfolio, Funding (equity and liabilities) and Efficiency and profitability. It evaluates three kinds of sustainability: financial, organizational and operational.	A+; A; A-; B+; B; B-; C+; C; C-; D; E
<b>M-CRIL</b>	Indian specialized microfinance rating agency. It has conducted 185 assessments of MFIs from South Asia, East Asia and the Pacific and CEE/NIS.	It uses a rating tool with three categories of indicators: governance and strategy, management systems, and financial performance.	a+++; a++; a+; a,a-; b+; b; b-; g+; g
<b>Microrate</b> ( <a href="http://www.microrate.com/">www.microrate.com/</a> )	Specialized microfinance rating agency based in the USA. It has conducted 172 MFIs assessments in Latin America and Africa.	For this agency, there is no unique criterion applying equally to all MFIs. It tries to identify this hierarchy correctly for each analysis. But the criteria ranked most frequently are: portfolio quality, operational effectiveness, management and governance.	a++; a+; a,a-; b+; b; b-; g+; g; g-
<b>CRISIL</b>	Rating agency with specialized microfinance practice. So far, it has conducted 18 assessments of MFIs from Southeast Asia.	It has developed the MICROS methodology, with six indicators: Management 25%, Institutional Arrangement 15%, Capital Adequacy & Asset Quality 20%, Resources 10%, Operational Effectiveness 15%, and Scalability & Sustainability 15%.	mfR1; mfR2; mfR3; mfR4; mfR5; mfR6; mfR7; mfR8;
<b>Apoyo &amp; Asociados</b>	Formal rating agency affiliated to Fitch Ratings. It has conducted 86 assessments to Latin American MFIs.	It issues a report containing information about: equity, performance, credit risk, funds diversification, market situation, operational and technological risks, management and ownership, and future trends.	A; B; C; D; E

<b>Class rating</b>	Formal specialized rating agency that has undertaken, so far, more than 20 assessments to Latin American MFIs.	The assessment of bonds, debt, shares and financial strength (global risk assessment) of financial institutions takes 5 steps: information analysis, solvency analysis, liquidity analysis, issue's contract analysis and final classification.	A; B; C; D; E
<b>Equilibrium</b>	Formal rating agency that conducts credit rating assessments to Latin American MFIs. So far it has conducted 13 MFI assessments.	It performs a quantitative analysis, focused on asset quality, capital adequacy, profitability, liquidity, balance sheet mix, funding strengths and weaknesses, cash flows, and so on. On the other hand, qualitatively, it assesses the management quality, business diversification and financial flexibility.	A; B; C; D; E
<b>Feller rate</b>	Formal rating agency, Standard and Poor's strategic alliance partner, that so far has conducted 8 assessments to Latin American MFIs.	The rating is based both in solvency classification and product's own characteristics. For debt titles assessments, Feller examines guarantees, which can lead to different repayment capacities.	AAA; AA; A; BBB; BB; B; CCC; CC; C; DDD; DD; D
<b>Fitch Rating</b>	International formal rating agency, It conducts credit ratings and global risk assessments. So far, its Chilean branch has performed assessments to 20 Latin American MFIs.	The rating is a comprehensive qualitative and quantitative assessment of strengths and weaknesses of the institution. Quantitative aspects e.g. balance sheet integrity, or profitability and risk management are counterbalanced by qualitative considerations about strategy, management quality, environment issues and future perspectives.	AAA; AA; A; BBB; BB; B; CCC; CC; C; DDD; DD; D
<b>JCR-VIS</b>	Pakistani formal rating agency. It mainly performs credit ratings and has conducted 5 assessments of South Asian MFIs.	It uses a methodology called MIRACLES, the acronym for Management, Information Systems, Reputation, Asset quality, Capital, Liquidity, Earnings and Supervisory systems (internal and external).	AAA; AA; A; BBB; BB; B; CCC; CC; C; DDD; DD; D
<b>Micro finanza</b>	Italian specialized micro finance rating agency. It has completed 20 assessments to MFIs in Africa, CEE/NIS, Latin America, and South Asia.	It performs a quantitative and qualitative assessment of strengths and weaknesses of the MFI, to grade the risk on two categories: fiduciary risk (related to governance and management) and credit risk (obligations repayment ability).	AAA; AA; A; BBB; BB; B; CCC; CC; C; DDD; DD; D
<b>Pacific Credit Rating</b>	Formal rating agency that mainly conducts credit ratings. It has undertaken 7 assessments to Latin American MFIs.	Formal rating agency that mainly conducts credit ratings. It has undertaken 7 assessments to Latin American MFIs.	m1; m2; m3; m4; m5; m6; m7; m8; m9; m10; m11; m12; m13; m14
<b>The Philippine Coalition for Microfinance Standards</b>	Considers (1) Outreach; (2) Repayment Rate; (3) Portfolio at Risk; (4) Operating Cost Ratio; (5) Operational Self-Sufficiency; (6) Financial Self-Sufficiency; (7) Equity to Asset Ratio; and (8) Current Ratio.	Here to consider Outreach: Number of Active Clients. For Collection Efficiency and Portfolio Quality: Repayment And Portfolio at Risk for Sustainability: Operating Cost Ratio, Operational Self-Sufficiency and Financial Self-Sufficiency for Capital Adequacy / Leverage: Equity to Asset Ratio for Liquidity: Current Ratio are measured	
<b>SEEP</b>  (Source SEEP net work and Calmeadow 1995)	Seep analyses the financial condition of an MFI. The framework is divided into three groups, each of which comprises of a set o ratios naming financial sustainability, financial efficiency and portfolio quality.	The first group contains for the Return on performing assets, financial cost ratio, loan loss provision ratio, and operating cost ratio ,adjusted cost of capital , donations and grants ratio, operating self sufficiency ratio, and financial self sufficiency ratio where the second group contains the cost per unit of money lent , cost per loan made, number of active borrowers per credit officer, portfolio per credit officer and the third group contains the portfolio in arrears, portfolio at risk, loan loss ratio, reserve ratio.	

## Appendix VII

### Weighting methodology

- The method takes advantage of the linear portion of the logit model. Ignoring the intercept terms, the linear portion is a weighted sum of the MFI's financial data, which can be denoted  $\beta x$  and equals  $\beta_1 x_1 + \beta_2 x_2 + \dots + \beta_{12} x_{12}$ .
- Considering two institutions: MFI A (with financial data  $x^A = x_1^A, x_2^A, \dots, x_{14}^A$ ) and MFI B (with financial data  $x^B = x_1^B, x_2^B, \dots, x_{14}^B$ ). The difference in the measure of financial strength of the two banks is  $\beta x^A - \beta x^B = \beta (x^A - x^B)$ . The first variable accounts for  $\beta_1 (x_1^A - x_1^B)$  of this difference, or, in percentage terms:
- This percentage would indicate the importance of the capital-asset ratio, for example, in explaining the difference in financial strength of the two MFIs. These percentages (for variables  $x_1, x_2$ , and so forth) necessarily sum to 100. The percentages can be negative; a negative percentage could occur if MFI A were stronger, on the whole, than MFI B but had a lower (weaker) capital-asset ratio.

## Appendix VIII

### The Principles Corporate Success

#### **Principle 1: Performance Orientation**

The principal objective of business enterprises is to enhance economic value for all shareholders by making the most efficient use of resources. A company that meets this shareholder value creation objective will have greater internally generated resources, improving its prospects for meeting its environmental, community, and social obligations; pay taxes; reward, train, and retain key staff; and enhance employee satisfaction. A key focus area is a company's human capital strategy, which is a lead indicator of corporate success.

#### **Principle 2: Nomination and Compensation Committees**

A key success factor is the quality of leadership of an enterprise. A nomination committee with a written mandate and terms of reference consistent with good practice may ensure the selection of directors and a chief executive officer (CEO) of the highest caliber. Comprising mainly of independent directors, the committee should have a written definition of independence, inclusive of both subjective and objective criteria. A compensation committee should set the compensation policy for directors and senior management, commensurate with performance measured against comparable industry benchmarks and key performance indicators such as economic value added.

#### **Principle 3: Disclosure**

To ensure transparency, companies' annual reports should disclose true and fair accounting information prepared in accordance with applicable standards; consider substance over form in the presentation of accounts; disclose and discuss all material risks; disclose and explain the rationale for all material estimates; show manner of compliance, or explain deviations, if any, with applicable corporate governance codes; discuss goals, plans, and progress; and provide access to the register of shareholders showing beneficial ownership. In addition to annual disclosures, enterprises should comply with applicable continuous disclosure requirements. Disclosures should be timely and adequate to enable investors, third party analysts, or rating agencies to assess the quality of corporate governance and the true financial condition of the enterprise.

#### **Principle 4: Audit Committee**

Audit committees with the following attributes are more effective: composed solely of independent directors, at least two of whom should have the requisite knowledge of accountancy, financial analysis, and financial reporting; at least one member should have a good understanding of the business of the enterprise; have a written mandate and terms of reference; engage only independent external auditors who should be answerable to the committee; and require that a suitable system of internal control and risk management is embedded into the fabric of the company; and focus on the substance of underlying transactions.

**Principle 5: Code of Conduct**

All enterprises must have a written code of business conduct and establish systems to ensure that it and all applicable laws are followed in letter and spirit.

**Principle 6: Conflicts of Interest**

Directors owe a fiduciary duty to the company that requires them to act in the best interest of the company. Actual and potential conflicts of interest should be identified, disclosed, and explained in sufficient detail to enable valid judgments to be made on their adverse impact. The persons who are conflicted should not participate in discussion and decision of the issue in question, nor be entitled to vote on any resolution where they are conflicted. Related party contracts should be disclosed in the annual report.

**Principle 7: Environmental and Social Commitment**

There is an inextricable relationship among the objectives of corporate performance, social development, and environmental protection. Enterprises, to be sustainable, will need to recognize and effectively deal with this triad of concerns, which, at times, may conflict with each other.

**Principle 8: Conduct of the Board of Directors**

Directors are expected to preserve and enhance shareholder value. Their effectiveness can be enhanced if they are legally empowered, have the requisite qualifications for the board committees on which they sit, make the needed time commitment, given the appropriate directorship training, are suitably compensated, receive proper notice of meetings, have the right to propose agenda items, consult each other privately in the absence of management and executive directors, and provided with appropriate information to enable them to perform their monitoring role and evaluate the performance of directors. They should be proactive and diligent.

**Principle 9: Responsibilities of Investors**

The pursuit of good corporate governance in investee enterprises is a risk management tool. Institutional investors, general partners, and fund managers have a fiduciary duty to actively monitor and vote on issues vital to the success of enterprises in which they invest as guardians of the savings entrusted to them. Enterprises will find it helpful to communicate with them, deliver in a timely manner true and fair disclosure reports, and remove impediments from voting by all shareholders by taking advantage of modern communications and follow a one-vote for one-share policy. The fair treatment of minority shareholders must be ensured and large institutional investors should lead the pursuit of shareholder rights.

**Principle 10: The Role of Directors in Turnaround Situations**

Directors of troubled companies must play a proactive role in turnaround situations, but avoid preferential treatment of creditors, or trade when the company is insolvent.

Weight		Area	Ratios	1	2	3	4
				Ad-din	AFAUS	Prodipan	PSKS
0.5179	1	Capital Adequacy	DER	4.73	8.65	31.50	11.35
0.0067	2		BR	0.07	0.04	0.26	-0.07
0.5246				4.68	8.55	31.11	11.22
0.0000	3	Asset Quality	GRD	0.11	0.10	0.18	0.10
0.0146	4		PAR	1.08	1.10	1.00	0.00
0.1009	5		DSCR	1.70	1.43	1.10	1.24
0.0742	6		BSS	1.71	1.43	1.36	1.04
0.1897				1.66	1.40	1.19	1.07
-0.0031	7	Mgt.	ROE	0.21	0.03	0.69	9.09
0.0196	8		IAPA=ROPA	0.17	0.17	0.13	0.18
0.0140	9		OCAPA	0.10	0.12	0.13	0.12
0.0346	10		SR	0.44	0.48	0.03	0.30
0.0140	11		KTA	0.11	0.10	0.05	0.03
0.0791				0.26	0.29	0.05	-0.15
0.0005	12	Earnings		0.02	0.00	-0.04	-0.03
0.0071	13			0.16	0.12	0.04	9.74
0.0076				0.15	0.11	0.03	9.10
0.1268	14	Liquidity	Current Ratio	1.54	1.79	1.90	2.52
0.0723	15		ODR	0.97	0.99	0.48	0.80
0.1991				1.33	1.49	1.38	1.89

Weight		Area	Issues	1	2	22	23
				Ad-din	AFAUS	Prodipan	PSKS
0.0562	1	Com. to Social Responsibility	Response in disaster (SR1)	3.00	3.00	3.00	3.00
0.1879	2		Internal control (SR2)	3.00	4.00	2.00	3.00
0.0216	3		Interest rate (SR3)	3.00	4.00	3.00	4.00
0.0637	4		Cash flow Proj.(SR4)	3.00	3.00	2.00	3.00
0.1177	5		Over Indebtness (SR5)	3.00	2.00	2.00	4.00
0.0464	6		Ethical practices (SR6)	4.00	4.00	3.00	4.00
0.4935				3.09	3.28	2.25	3.38
0.1998	7	Com. to Excluded People	Program coverage (E1)	4.00	1.00	4.00	3.00
0.1512	8		Efficiency (E2)	4.00	3.00	2.00	3.00
0.1069	9		Insurance (E3)	4.00	3.00	3.00	3.00
0.4579				4.00	2.13	3.11	3.00
0.0324	10	Com. to Good Governance	Loan classification (GG1)	4.00	4.00	1.00	4.00
0.0227	11		Service charges (GG2)	4.00	4.00	3.00	4.00
0.0529	12		Relief (GG3)	4.00	4.00	2.00	4.00
0.1080				4.00	4.00	1.91	4.00
-0.0799	13	Com. to Poverty Reduction	No. of FC Ins. (GR1) (GR2)	4.00	6.00	3.00	5.00
0.0205	14		Last AGM held (PR2)	3.00	3.00	3.00	3.00
-0.0594				4.30	6.97	2.97	5.63



Area	Ratios	5	6	7	8	9	10
		SJK	BASTAB	SACHETAN	GKT	CREED	AF
Capital Adequacy	DLR	-0.82	3.47	-0.06	7.84	1.79	18.86
	BR	0.04	0.00	0.02	0.01	0.01	0.06
		<b>-0.80</b>	<b>3.44</b>	<b>-0.05</b>	<b>7.75</b>	<b>1.78</b>	<b>18.63</b>
Asset Quality	CPII	0.10	0.08	0.22	0.08	0.10	0.16
	PAR	1.15	0.00	0.02	0.01	0.01	0.08
	DSCR	1.07	3.46	0.95	1.61	1.30	0.83
	OSS	2.01	1.66	1.23	0.01	1.81	1.10
		<b>1.44</b>	<b>2.49</b>	<b>0.99</b>	<b>0.86</b>	<b>1.40</b>	<b>0.88</b>
Mgt.	ROE	0.02	0.19	1.69	0.42	0.11	-0.01
	LAPA-ROPA	0.11	0.04	0.04	0.00	0.02	0.08
	OCAPA	0.07	0.02	0.03	0.00	0.01	0.07
	SR	0.02	0.04	0.03	0.11	0.02	0.10
	KTA	0.15	0.21	0.08	0.11	0.34	0.32
		<b>0.08</b>	<b>0.06</b>	<b>-0.02</b>	<b>0.05</b>	<b>0.07</b>	<b>0.14</b>
Earnings		0.05	0.04	-0.14	-0.09	0.03	-0.17
		0.00	0.23	-0.08	0.16	0.34	-0.05
		<b>0.00</b>	<b>0.21</b>	<b>-0.09</b>	<b>0.14</b>	<b>0.32</b>	<b>-0.06</b>
Liquidity	Current Ratio	1.98	1.33	1.38	1.31	2.59	2.15
	ODR	0.98	0.99	0.90	0.99	0.95	0.84
		<b>1.61</b>	<b>1.20</b>	<b>1.20</b>	<b>1.19</b>	<b>1.98</b>	<b>1.67</b>

Area	Issues	29	44	45	49	50	53
		SJK	Bastab	SACHETAN	GKT	CREED	AF
Com. to Social Responsibility	Response in disaster (SR1)	4.00	2.00	3.00	4.00	1.00	2.00
	Internal control (SR2)	1.00	2.00	3.00	4.00	2.00	2.00
	Interest rate (SR3)	4.00	3.00	3.00	4.00	2.00	2.00
	Cash flow Proj.(SR4)	2.00	2.00	3.00	4.00	2.00	1.00
	Over indebtedness (SR5)	2.00	2.00	3.00	4.00	1.00	1.00
	Ethical practices (SR6)	4.00	2.00	3.00	4.00	1.00	2.00
		<b>2.12</b>	<b>2.04</b>	<b>3.00</b>	<b>4.00</b>	<b>1.55</b>	<b>1.63</b>
Com. to Excluded People	Progn. coverage (Ex1)	1.00	2.00	3.00	3.00	1.00	1.00
	Efficiency (Ex2)	2.00	2.00	3.00	4.00	1.00	1.00
	Insurance (Ex3)	2.00	2.00	3.00	3.00	1.00	1.00
		<b>1.56</b>	<b>2.00</b>	<b>3.00</b>	<b>3.33</b>	<b>1.00</b>	<b>1.00</b>
Com. to Good Governance	Transparency (GG1)	4.00	2.00	4.00	4.00	2.00	3.00
	Service charge (GG2)	4.00	2.00	3.00	4.00	2.00	2.00
	Reliance (GG3)	4.00	2.00	4.00	4.00	2.00	3.00
		<b>4.00</b>	<b>2.00</b>	<b>3.79</b>	<b>4.00</b>	<b>2.00</b>	<b>2.79</b>
Com. to Poverty Reduction	No. of EC meeting held (PR1)	2.00	3.00	2.00	4.00	5.00	3.00
	Last AGM held (PR2)	3.00	3.00	3.00	3.00	3.00	3.00
		<b>1.64</b>	<b>2.97</b>	<b>1.64</b>	<b>4.30</b>	<b>5.63</b>	<b>2.97</b>

Area	Ratios	11	12	13	14	15	16
		HELP	MUK	ROVA	NABOLOK	BSDO	ATMABISWAS
Capital Adequacy	DLR	9.50	2.02	57.57	14.70	3.90	7.20
	RR	0.01	0.01	0.01	0.03	0.00	0.01
		<b>9.39</b>	<b>2.01</b>	<b>56.85</b>	<b>14.53</b>	<b>3.86</b>	<b>7.12</b>
Asset Quality	CPTL	0.10	0.10	0.47	0.02	0.04	0.11
	PAR	0.01	0.01	0.07	0.03	0.00	0.02
	DSCR	1.06	1.18	0.90	2.12	1.41	1.10
	DSS	1.90	1.84	1.18	-2.24	3.14	1.79
		<b>1.31</b>	<b>1.35</b>	<b>0.94</b>	<b>0.25</b>	<b>1.98</b>	<b>1.29</b>
Mgt.	ROE	0.21	0.25	-0.94	0.38	0.41	0.36
	JAPA-ROPA	0.04	0.09	0.02	0.08	0.02	0.14
	OCAPA	0.02	0.05	0.02	-0.03	0.01	0.08
	SR	0.04	0.16	0.02	0.06	0.02	0.09
	KTA	0.08	0.18	0.03	0.06	0.20	0.13
		<b>0.04</b>	<b>0.12</b>	<b>0.06</b>	<b>0.03</b>	<b>0.04</b>	<b>0.09</b>
Earnings		0.02	0.04	-0.09	0.15	0.07	0.03
		0.08	0.25	0.02	0.07	0.24	0.14
		<b>0.08</b>	<b>0.23</b>	<b>0.01</b>	<b>0.08</b>	<b>0.23</b>	<b>0.14</b>
Liquidity	Current Ratio	1.84	1.38	2.11	1.33	2.22	1.48
	ODR	0.97	0.99	0.87	0.92	0.99	0.98
		<b>1.52</b>	<b>1.23</b>	<b>1.65</b>	<b>1.18</b>	<b>1.76</b>	<b>1.29</b>

Area	Issues	54	56	57	58	59	61
		HELP	MUK	ROVA	NABOLOK	BSDO	ATMABISWAS
Com. to Social Responsibility	Response in disaster (SR1)	3.00	1.00	3.00	4.00	2.00	3.00
	Internal control (SR2)	1.00	2.00	1.00	3.00	1.00	2.00
	Interest rate (SR3)	3.00	3.00	4.00	4.00	3.00	3.00
	Cash flow Proj.(SR4)	3.00	2.00	3.00	3.00	3.00	3.00
	Over indebtedness (SR5)	1.00	2.00	2.00	4.00	2.00	3.00
	Ethical practices (SR6)	4.00	3.00	4.00	4.00	3.00	3.00
		<b>1.86</b>	<b>2.02</b>	<b>2.14</b>	<b>3.49</b>	<b>1.89</b>	<b>2.62</b>
Com. to Excluded People	Progm. coverage (Ex1)	1.00	1.00	1.00	1.00	1.00	1.00
	Efficiency (Ex2)	2.00	2.00	2.00	3.00	2.00	3.00
	Insurance (Ex3)	1.00	1.00	4.00	4.00	3.00	4.00
		<b>1.33</b>	<b>1.33</b>	<b>2.03</b>	<b>2.36</b>	<b>1.80</b>	<b>2.36</b>
Com. to Good Governance	Loan Classification (GG1)	4.00	3.00	4.00	4.00	4.00	4.00
	Service Charge (GG2)	3.00	3.00	4.00	4.00	4.00	3.00
	REG (GG3)	4.00	4.00	3.00	4.00	4.00	4.00
		<b>3.79</b>	<b>3.49</b>	<b>3.51</b>	<b>4.00</b>	<b>4.00</b>	<b>3.79</b>
Com. to Poverty Reduction	Non-ATM meeting held (PR1)	3.00	1.00	2.00	2.00	3.00	2.00
	Lab AGM held (PR2)	3.00	1.00	3.00	3.00	3.00	2.00
		<b>2.97</b>	<b>0.99</b>	<b>1.64</b>	<b>1.64</b>	<b>2.97</b>	<b>1.98</b>

Area	Ratios	17	18	19	20	21	22
		VARD	NELS	SSUS	DDAN	ASUK	PDO
Capital Adequacy		7.33	6.12	4.26	2.80	1.65	0.07
		0.01	0.00	0.00	0.00	0.00	0.00
		<b>7.25</b>	<b>6.05</b>	<b>4.22</b>	<b>2.78</b>	<b>1.64</b>	<b>0.08</b>
Asset Quality		0.18	0.12	0.10	0.15	0.20	0.08
		0.24	0.00	0.01	0.00	0.00	0.00
		1.00	0.96	1.07	0.92	4.01	1.67
		1.40	1.32	1.66	1.15	1.42	1.27
		<b>1.10</b>	<b>1.03</b>	<b>1.22</b>	<b>0.94</b>	<b>2.69</b>	<b>1.39</b>
Mgt.		0.00	-0.18	0.11	-0.10	-0.08	0.09
		0.17	0.01	0.01	0.01	0.00	0.00
		0.13	0.01	0.01	0.00	0.00	0.00
		0.17	0.01	0.01	0.01	0.00	0.00
		0.07	0.06	0.15	0.16	0.30	0.13
		<b>0.15</b>	<b>0.02</b>	<b>0.03</b>	<b>0.04</b>	<b>0.06</b>	<b>0.02</b>
Earnings		-0.01	-0.01	0.02	-0.02	-0.03	0.01
		0.13	0.07	0.19	0.20	0.34	0.14
		<b>0.12</b>	<b>0.07</b>	<b>0.18</b>	<b>0.19</b>	<b>0.32</b>	<b>0.13</b>
Liquidity	Current Ratio	1.29	1.61	1.79		1.34	1.89
	ODR	0.85	0.95	0.97	0.87	0.87	0.99
		<b>1.13</b>	<b>1.37</b>	<b>1.48</b>	<b>0.31</b>	<b>1.16</b>	<b>1.56</b>

Area	Issues	62	63	66	67	68	69
		VARD	NELS	SSUS	DDAN	ASUK	PDO
Com. to Social Responsibility	Response in disaster (SR1)	3.00	2.00	3.00	1.00	2.00	4.00
	Internal control (SR2)	1.00	1.00	3.00	2.00	1.00	1.00
	Interest rate (SR3)	4.00	3.00	3.00	1.00	3.00	4.00
	Cash flow Proj.(SR4)	1.00	2.00	3.00	1.00	1.00	1.00
	Over indebtiness (SR5)	3.00	2.00	2.00	2.00	1.00	3.00
	Ethical practices (SR6)	4.00	2.00	3.00	1.00	2.00	4.00
		<b>2.12</b>	<b>1.66</b>	<b>2.76</b>	<b>1.62</b>	<b>1.30</b>	<b>2.23</b>
Com. to Excluded People	Progm. coverage (Ex1)	1.00	1.00	1.00	1.00	1.00	1.00
	Efficiency (Ex2)	1.00	2.00	3.00	2.00	2.00	3.00
	Insurance (Ex3)	4.00	3.00	4.00	1.00	2.00	3.00
		<b>1.70</b>	<b>1.80</b>	<b>2.36</b>	<b>1.33</b>	<b>1.56</b>	<b>2.13</b>
Com. to Good Governance	Loan classification (GG1)	3.00	3.00	4.00	1.00	3.00	4.00
	Salary charge (GG2)	3.00	2.00	3.00	1.00	3.00	4.00
	Reserve (GG3)	3.00	3.00	4.00	1.00	4.00	4.00
		<b>3.00</b>	<b>2.79</b>	<b>3.79</b>	<b>1.00</b>	<b>3.49</b>	<b>4.00</b>
Com. to Poverty Reduction	No. of EC meeting held (PR1)	3.00	4.00	3.00	6.00	3.00	3.00
	Last AGM held (PR2)	3.00	3.00	3.00	3.00	3.00	3.00
		<b>2.97</b>	<b>4.30</b>	<b>2.97</b>	<b>6.97</b>	<b>2.97</b>	<b>2.97</b>

		23	24	25	26	27	28
Area	Ratios	MBSK	TSSS	PMUS	DORP	SUS1	AHDO
Capital Adequacy	DER	1.58	8.80	11.55	0.10	3.76	8.24
	RR	0.01	0.00	0.01	0.01	0.02	0.00
		1.57	8.70	11.42	0.11	3.72	8.15
Asset Quality	GP11	0.07	0.10	0.10	0.09	0.14	0.08
	PAR	0.01	0.00	0.19	0.02	0.02	0.01
	DSCR	2.45	1.03	1.07	1.14	1.01	1.10
	DSS	1.87	1.36	1.40	2.05	2.11	1.77
		2.04	1.08	1.13	1.41	1.36	1.28
Mgt.	ROE	0.17	0.05	0.29	0.55	0.04	0.26
	IAPA-ROPA	0.07	0.00	0.07	0.04	0.07	0.04
	OCAPA	0.04	0.00	0.05	0.02	0.03	0.02
	SR	0.07	0.00	0.05	0.04	0.05	0.03
	KTA	0.36	0.10	0.08	0.40	0.19	0.09
		0.11	0.02	0.05	0.08	0.08	0.03
Earnings		0.05	0.00	0.02	0.04	0.01	0.02
		0.50	0.11	0.10	0.00	0.23	0.11
		0.47	0.10	0.09	0.00	0.22	0.11
Liquidity	Current Ratio	2.28	1.80	1.60	1.75	1.70	1.69
	ODR	0.97	0.93	0.98	0.93	0.94	0.97
		1.79	1.48	1.37	1.45	1.42	1.42

		70	72	74	76	77	78
Area	Issues	MBSK	TSSS	PMUS	DORP	SUS1	AHDO
Com. to Social Responsibility	Response in disaster (SR1)	4.00	1.00	3.00	4.00	4.00	4.00
	Internal control (SR2)	2.00	1.00	2.00	3.00	3.00	1.00
	Interest rate (SR3)	3.00	1.00	4.00	4.00	3.00	4.00
	Cash flow Proj.(SR4)	1.00	2.00	3.00	3.00	2.00	1.00
	Over indebtedness (SR5)	2.00	1.00	2.00	2.00	3.00	4.00
	Ethical practices (SR6)	2.00	2.00	2.00	4.00	2.00	4.00
		2.14	1.22	2.33	3.01	2.89	2.47
Com. to Excluded People	Progm. coverage (Ex1)	1.00	1.00	2.00	1.00	1.00	1.00
	Efficiency (Ex2)	1.00	1.00	2.00	3.00	3.00	4.00
	Insurance (Ex3)	3.00	2.00	2.00	1.00	3.00	4.00
		1.47	1.23	2.00	1.66	2.13	2.69
Com. to Good Governance	Loan classification (GG1)	4.00	2.00	3.00	4.00	4.00	4.00
	Service charge (GG2)	3.00	2.00	4.00	3.00	3.00	4.00
	Reserve (GG3)	4.00	1.00	4.00	2.00	4.00	4.00
		3.79	1.51	3.70	2.81	3.79	4.00
Com. to Poverty Reduction	New ICG meeting held (PR1)	2.00	4.00	3.00	3.00	3.00	2.00
	JSHAYM held (PR2)	3.00	3.00	3.00	3.00	3.00	3.00
		1.64	4.30	2.97	2.97	2.97	1.64

		29	30	31	32	33	34
Area	Ratios	ACD	SAPB	JRDM	ARCHES	JF	CEDAR
Capital Adequacy	DER	10.27	7.43	0.08	24.13	7.43	3.07
	RR	0.01	0.02	0.03	0.01	0.02	0.03
		<b>10.15</b>	<b>7.35</b>	<b>0.09</b>	<b>23.83</b>	<b>7.35</b>	<b>3.04</b>
Asset Quality	CPII	0.10	0.18	0.10	0.00	0.09	0.16
	PAR	0.01	0.18	0.04	0.01	0.02	0.03
	DSCR	1.03	1.04	0.01	1.01	1.92	1.07
	OSS	1.54	1.30	1.71	-2.74	1.59	1.50
		<b>1.15</b>	<b>1.08</b>	<b>0.68</b>	<b>-0.53</b>	<b>1.64</b>	<b>1.16</b>
Mgt.	ROE	0.07	0.12	0.31	0.29	0.52	0.05
	IAPA-ROPA	0.03	0.13	0.20	0.05	0.31	0.08
	OCAPA	0.02	0.10	0.12	-0.02	0.19	0.06
	SR	0.03	0.10	0.11	0.04	0.16	0.08
	KTA	0.08	0.12	0.11	0.04	0.11	0.22
		<b>0.03</b>	<b>0.11</b>	<b>0.12</b>	<b>0.02</b>	<b>0.18</b>	<b>0.10</b>
Earnings		0.01	0.00	0.03	0.20	0.05	0.00
		0.10	0.14	0.13	0.04	0.16	0.21
		<b>0.10</b>	<b>0.13</b>	<b>0.12</b>	<b>0.05</b>	<b>0.15</b>	<b>0.19</b>
Liquidity	Current Ratio	1.88	2.10	2.34	0.93	1.70	2.90
	ODR	0.95	0.95	0.97	1.05	1.00	0.93
		<b>1.54</b>	<b>1.67</b>	<b>1.83</b>	<b>0.97</b>	<b>1.44</b>	<b>2.17</b>

		79	80	84	85	86	88
Area	Issues	ACD	SAPB	JRDM	ARCHES	JF	CEDAR
Com. to Social Responsibility	Response in disaster (SR1)	4.00	4.00	1.00	3.00	3.00	2.00
	Internal control (SR2)	1.00	3.00	1.00	3.00	2.00	1.00
	Interest rate (SR3)	4.00	4.00	3.00	4.00	3.00	3.00
	Cash flow Proj.(SR4)	3.00	4.00	1.00	3.00	2.00	2.00
	Over indebtedness (SR5)	3.00	2.00	1.00	1.00	2.00	2.00
	Ethical practices (SR6)	4.00	3.00	2.00	3.00	2.00	2.00
		<b>2.49</b>	<b>3.05</b>	<b>1.18</b>	<b>2.57</b>	<b>2.16</b>	<b>1.66</b>
Com. to Excluded People	Program coverage (Ex1)	1.00	3.00	2.00	3.00	2.00	1.00
	Efficiency (Ex2)	3.00	3.00	2.00	3.00	2.00	2.00
	Insurance (Ex3)	4.00	3.00	2.00	3.00	2.00	3.00
		<b>2.36</b>	<b>3.00</b>	<b>2.00</b>	<b>3.00</b>	<b>2.00</b>	<b>1.80</b>
Com. to Good Governance	Transparency (GG1)	4.00	2.00	3.00	4.00	3.00	4.00
	Stakeholder (GG2)	4.00	4.00	2.00	3.00	3.00	3.00
	Reserve (GG3)	4.00	2.00	3.00	4.00	3.00	4.00
		<b>4.00</b>	<b>2.42</b>	<b>2.79</b>	<b>3.79</b>	<b>3.00</b>	<b>3.79</b>
Com. to Poverty Reduction	Nasir EC-presiding held (PR1)	3.00	2.00	4.00	3.00	4.00	3.00
	East Av.M held (PR2)	3.00	3.00	3.00	3.00	3.00	3.00
		<b>2.97</b>	<b>1.64</b>	<b>4.30</b>	<b>2.97</b>	<b>4.30</b>	<b>2.97</b>

		35	36	37	38	39	40
Area	Ratios	ASO	NEF	DBS	GUP	KPUS	NUSA
Capital Adequacy	DER	13.49	11.92	3.45	3.12	11.49	9.34
	RR	0.00	0.00	0.00	0.01	0.01	0.03
		<b>13.33</b>	<b>11.78</b>	<b>3.42</b>	<b>3.09</b>	<b>11.36</b>	<b>9.23</b>
Asset Quality	CP11	0.10	0.10	0.08	0.13	0.11	0.10
	PAR	0.01	0.00	0.00	0.07	0.01	0.39
	DSCR	1.17	1.07	1.65	1.13	4.65	0.97
	OSS	1.52	1.40	1.88	1.46	1.46	1.84
		<b>1.22</b>	<b>1.12</b>	<b>1.61</b>	<b>1.18</b>	<b>3.05</b>	<b>1.27</b>
Mgt.	ROE	0.20	0.32	0.24	0.24	0.48	0.36
	IAPA-ROPA	0.05	0.03	0.12	0.07	0.04	0.13
	OCAPA	0.03	0.02	0.07	0.05	0.03	0.07
	SR	0.03	0.02	0.06	0.09	0.04	0.11
	KTA	0.10	0.13	0.22	0.15	0.12	0.09
		<b>0.04</b>	<b>0.03</b>	<b>0.10</b>	<b>0.08</b>	<b>0.04</b>	<b>0.09</b>
Earnings		0.01	0.02	0.05	0.00	0.02	0.03
		0.09	0.11	0.22	0.17	0.10	0.11
		<b>0.08</b>	<b>0.10</b>	<b>0.21</b>	<b>0.16</b>	<b>0.10</b>	<b>0.11</b>
Liquidity	Current Ratio	1.47	1.42	1.26	5.98	1.40	1.62
	ODR	0.99	0.98	1.00	0.89	0.98	0.96
		<b>1.29</b>	<b>1.25</b>	<b>1.16</b>	<b>4.11</b>	<b>1.24</b>	<b>1.37</b>

		90	92	95	96	97	98
Area	Issues	ASO	NEF	DBS	GUP	KPUS	NUSA
Com. to Social Responsibility	Response in disaster (SR1)	4.00	4.00	2.00	3.00	4.00	3.00
	Internal control (SR2)	3.00	2.00	2.00	2.00	1.00	3.00
	Interest rate (SR3)	3.00	4.00	3.00	3.00	3.00	2.00
	Cash flow Proj.(SR4)	2.00	3.00	1.00	2.00	1.00	3.00
	Over indebtedness (SR5)	2.00	4.00	2.00	2.00	2.00	2.00
	Ethical practices (SR6)	3.00	4.00	2.00	2.00	2.00	3.00
		<b>2.75</b>	<b>3.11</b>	<b>1.91</b>	<b>2.16</b>	<b>1.76</b>	<b>2.72</b>
Com. to Excluded People	Progm. coverage (Ex1)	2.00	2.00	1.00	1.00	1.00	3.00
	Efficiency (Ex2)	2.00	3.00	2.00	3.00	2.00	3.00
	Insurance (Ex3)	3.00	3.00	3.00	3.00	1.00	3.00
		<b>2.23</b>	<b>2.56</b>	<b>1.80</b>	<b>2.13</b>	<b>1.33</b>	<b>3.00</b>
Com. to Good Governance	Loan classification (GG1)	4.00	4.00	3.00	4.00	4.00	3.00
	Securities charge (GG2)	3.00	4.00	3.00	3.00	3.00	2.00
	Reserve (GG3)	4.00	4.00	4.00	3.00	4.00	4.00
		<b>3.79</b>	<b>4.00</b>	<b>3.49</b>	<b>3.30</b>	<b>3.79</b>	<b>3.28</b>
Com. to Poverty Reduction	No. of EC meeting held (PR1)	6.00	5.00	5.00	4.00	4.00	6.00
	Last AGM held (PR2)	3.00	3.00	3.00	3.00	3.00	3.00
		<b>6.97</b>	<b>5.63</b>	<b>5.63</b>	<b>4.30</b>	<b>4.30</b>	<b>6.97</b>

		41	42	43	44	45	46
Area	Ratios	JKS	BEDO	BERDO	CODEC	ALWO	MAMATA
Capital Adequacy	DFR	8.55	12.50	3.52	5.43	8.42	7.87
	RR	0.00	0.01	0.00	0.02	0.02	0.00
		<b>8.45</b>	<b>12.35</b>	<b>3.49</b>	<b>5.37</b>	<b>8.33</b>	<b>7.78</b>
Asset Quality	CPTI	0.09	0.11	0.19	0.30	0.75	0.05
	PAR	0.01	0.02	0.01	0.10	0.02	0.00
	DSCR	2.04	1.05	0.80	2.90	1.31	67.43
	OSS	1.67	1.53	1.08	0.62	1.05	23.97
		<b>1.74</b>	<b>1.16</b>	<b>0.85</b>	<b>1.79</b>	<b>1.11</b>	<b>45.24</b>
Mgt.	ROE	0.36	0.18	0.00	0.00	-0.34	0.62
	IAPA=ROPA	0.08	0.13	0.01	0.03	0.01	0.08
	OCAPA	0.05	0.08	0.01	0.05	0.01	0.00
	SR	0.06	0.09	0.01	0.03	0.01	0.00
	KTA	0.10	0.07	0.35	0.28	0.09	0.20
		<b>0.06</b>	<b>0.09</b>	<b>0.07</b>	<b>0.08</b>	<b>0.04</b>	<b>0.03</b>
Earnings		0.03	0.01	-0.01	-0.17	-0.52	1.82
		0.13	0.08	0.26	0.21	0.11	0.10
		<b>0.13</b>	<b>0.08</b>	<b>0.24</b>	<b>0.19</b>	<b>0.07</b>	<b>0.21</b>
Liquidity	Current Ratio	0.99	1.80	1.86	0.54	1.11	2.00
	Capex	1.00	0.98	0.98	0.89	0.60	1.00
		<b>0.99</b>	<b>1.50</b>	<b>1.53</b>	<b>0.67</b>	<b>0.92</b>	<b>1.63</b>

		100	101	102	103	104	105
Area	Issues	JKS	BEDO	BERDO	CODEC	ALWO	MAMATA
Com. to Social Responsibility	Response in disaster (SR1)	4.00	1.00	3.00	4.00	2.00	1.00
	Internal control (SR2)	4.00	2.00	3.00	3.00	1.00	4.00
	Interest rate (SR3)	4.00	3.00	3.00	2.00	2.00	3.00
	Cash flow Proj.(SR4)	4.00	3.00	2.00	4.00	3.00	4.00
	Over indebtedness (SR5)	3.00	3.00	2.00	3.00	1.00	4.00
	Ethical practices (SR6)	4.00	3.00	3.00	4.00	1.00	3.00
		<b>3.76</b>	<b>2.39</b>	<b>2.63</b>	<b>3.29</b>	<b>1.42</b>	<b>3.52</b>
Com. to Excluded People	Progn. coverage (Ex1)	4.00	3.00	2.00	2.00	1.00	3.00
	Efficiency (Ex2)	4.00	3.00	2.00	4.00	1.00	4.00
	Insurance (Ex3)	4.00	3.00	3.00	3.00	1.00	3.00
		<b>4.00</b>	<b>3.00</b>	<b>2.23</b>	<b>2.89</b>	<b>1.00</b>	<b>3.33</b>
Com. to Good Governance	Legal classification (GG1)	4.00	3.00	3.00	4.00	1.00	4.00
	Service charge (GG2)	4.00	4.00	4.00	3.00	2.00	4.00
	Recovery (GG3)	4.00	4.00	3.00	2.00	3.00	4.00
		<b>4.00</b>	<b>3.70</b>	<b>3.21</b>	<b>2.81</b>	<b>2.19</b>	<b>4.00</b>
Com. to Poverty Reduction	Nos of GC meeting held (PR1)	4.00	2.00	5.00	3.00	6.00	3.00
	Last AGM held (PR2)	3.00	3.00	2.00	3.00	3.00	3.00
		<b>4.30</b>	<b>1.64</b>	<b>5.98</b>	<b>2.97</b>	<b>6.97</b>	<b>2.97</b>

		47	48	49	50	51	52
Area	Ratios	MUKTI	SUS2	SRYZONY	SOJAG	BRIDGE	SPUS
Capital Adequacy	DER	10.71	3.65	5.58	7.61	4.37	7.54
	RR	0.01	0.01	0.08	0.01	0.01	0.02
		<b>10.59</b>	<b>3.62</b>	<b>5.52</b>	<b>7.53</b>	<b>4.33</b>	<b>7.46</b>
Asset Quality	CPTI	0.10	0.12	0.14	0.07	0.22	0.18
	PAR	0.06	0.01	-3.35	0.01	0.10	0.07
	DSLIR	1.01	1.84	0.67	1.02	1.12	0.83
	DSS	16.73	1.30	1.26	2.11	1.30	1.81
		<b>7.09</b>	<b>1.49</b>	<b>0.59</b>	<b>1.37</b>	<b>1.11</b>	<b>1.15</b>
Mgt.	ROE	0.35	0.07	-0.05	-0.32	0.08	1.65
	IAPA-ROPA	0.70	0.10	0.16	0.19	0.04	0.02
	OCAPA	0.04	0.07	0.13	0.09	0.03	0.01
	SR	0.08	0.12	0.14	0.13	0.05	0.02
	KTA	0.08	0.21	0.15	1.12	0.23	-0.08
		<b>0.22</b>	<b>0.12</b>	<b>0.15</b>	<b>0.33</b>	<b>0.08</b>	<b>-0.07</b>
Earnings		1.59	0.01	-0.01	0.03	0.01	-0.08
		0.09	0.24	0.18	0.15	0.20	0.06
		<b>0.19</b>	<b>0.22</b>	<b>0.16</b>	<b>0.14</b>	<b>0.19</b>	<b>0.05</b>
Liquidity	Current Ratio	1.41	1.71	1.17	0.51	1.91	3.63
	ODR	0.98	0.88	1.08	1.00	0.92	0.74
		<b>1.25</b>	<b>1.40</b>	<b>1.13</b>	<b>0.68</b>	<b>1.54</b>	<b>2.57</b>

		106	107	108	110	111	112
Area	Issues	MUKTI	SUS2	SRYZONY	SOJAG	BRIDGE	SPUS
Com. to Social Responsibility	Response in disaster (SR1)	1.00	2.00	2.00	3.00	4.00	3.00
	Internal control (SR2)	2.00	1.00	3.00	3.00	1.00	1.00
	Interest rate (SR3)	3.00	2.00	3.00	4.00	4.00	4.00
	Cash flow Proj.(SR4)	1.00	2.00	2.00	4.00	1.00	1.00
	Over indebtness (SR5)	2.00	1.00	2.00	3.00	2.00	1.00
	Ethical practices (SR6)	2.00	2.00	3.00	4.00	4.00	1.00
		<b>1.80</b>	<b>1.38</b>	<b>2.52</b>	<b>3.27</b>	<b>1.99</b>	<b>1.36</b>
Com. to Excluded People	Progm. coverage (Ex1)	3.00	1.00	2.00	2.00	1.00	1.00
	Efficiency (Ex2)	2.00	1.00	3.00	3.00	1.00	1.00
	Insurance (Ex3)	3.00	2.00	3.00	4.00	4.00	3.00
		<b>2.67</b>	<b>1.23</b>	<b>2.56</b>	<b>2.80</b>	<b>1.70</b>	<b>1.47</b>
Com. to Good Governance	Young class (Gg1)	2.00	3.00	3.00	4.00	4.00	1.00
	Sec. discharge (Gg2)	2.00	2.00	3.00	4.00	1.00	2.00
	Res. exc. (Gg3)	1.00	3.00	4.00	4.00	4.00	1.00
		<b>1.51</b>	<b>2.79</b>	<b>3.49</b>	<b>4.00</b>	<b>3.37</b>	<b>1.21</b>
Com. to Poverty Reduction	No. of EC meeting held (PR1)	5.00	2.00	2.00	5.00	6.00	2.00
	Last AGM held (PR2)	3.00	3.00	3.00	2.00	3.00	3.00
		<b>5.63</b>	<b>1.64</b>	<b>1.64</b>	<b>5.98</b>	<b>6.97</b>	<b>1.64</b>



		53	54	55	56	57	58
Area	Ratios	SHATAPHOOL	SUSS	DAM	EWF	ARAB	ANTAR
Capital Adequacy	DER	8.65	9.98	4.15	0.24	3.35	14.38
	RR	0.00	0.02	0.06	0.03	0.02	0.00
		<b>8.55</b>	<b>9.87</b>	<b>4.11</b>	<b>0.25</b>	<b>3.32</b>	<b>14.21</b>
Asset Quality	CPL	0.09	0.20	0.16	0.15	0.14	0.05
	PAR	0.00	0.06	0.08	0.04	0.03	0.00
	DSCR	1.10	1.21	0.33	4.73	3.71	1.03
	OSS	1.94	1.05	0.82	1.03	2.04	1.58
		<b>1.34</b>	<b>1.06</b>	<b>0.50</b>	<b>2.92</b>	<b>2.77</b>	<b>1.17</b>
Mgt.	ROE	0.69	0.01	-0.56	0.09	0.14	0.28
	IAPA=ROPA	0.04	0.03	0.13	0.03	0.10	0.03
	OCAPA	0.02	0.03	0.16	0.03	0.05	0.02
	SR	0.03	0.02	0.14	0.13	0.08	0.02
	KTA	0.10	0.24	0.30	0.02	0.22	0.06
		<b>0.02</b>	<b>0.07</b>	<b>0.20</b>	<b>0.07</b>	<b>0.10</b>	<b>0.02</b>
Earnings		0.05	-0.05	-0.06	-0.02	0.03	0.02
		0.08	0.09	0.18	0.22	0.37	0.07
		<b>0.08</b>	<b>0.08</b>	<b>0.17</b>	<b>0.20</b>	<b>0.35</b>	<b>0.07</b>
Liquidity	Current Ratio	1.93	2.08	1.79	0.85	2.36	1.46
	ODR	1.00	0.88	0.89	0.79	0.92	0.99
		<b>1.59</b>	<b>1.64</b>	<b>1.46</b>	<b>0.82</b>	<b>1.83</b>	<b>1.28</b>

		113	115	116	118	119	121
Area	Issues	SHATAPHOOL	SUSS	DAM	EWF	ARAB	ANTAR
Com. to Social Responsibility	Response in disaster (SR1)	3.00	2.00	4.00	3.00	1.00	4.00
	Internal control (SR2)	1.00	2.00	2.00	4.00	4.00	2.00
	Interest rate (SR3)	3.00	4.00	4.00	4.00	1.00	4.00
	Cash flow Proj.(SR4)	1.00	1.00	2.00	3.00	1.00	3.00
	Over indebtness (SR5)	3.00	2.00	3.00	2.00	1.00	2.00
	Ethical practices (SR6)	3.00	2.00	4.00	1.00	1.00	2.00
		<b>1.98</b>	<b>1.96</b>	<b>2.74</b>	<b>3.00</b>	<b>2.14</b>	<b>2.44</b>
Com. to Excluded People	Progm. coverage (Ex1)	3.00	2.00	1.00	4.00	4.00	1.00
	Efficiency (Ex2)	3.00	2.00	2.00	3.00	4.00	2.00
	Insurance (Ex3)	3.00	2.00	3.00	4.00	4.00	4.00
		<b>3.00</b>	<b>2.00</b>	<b>1.80</b>	<b>3.67</b>	<b>4.00</b>	<b>2.03</b>
Com. to Good Governance	Transparency (GG1)	3.00	2.00	4.00	2.00	1.00	4.00
	SR coverage (GG2)	3.00	3.00	4.00	3.00	2.00	4.00
	Review (GG3)	3.00	2.00	1.00	2.00	2.00	4.00
			<b>3.00</b>	<b>2.21</b>	<b>2.53</b>	<b>2.21</b>	<b>1.70</b>
Com. to Poverty Reduction	Nos of EG meeting held (PR1)	2.00	2.00	3.00	3.00	3.00	4.00
	Last AGM held (PR2)	3.00	3.00	1.00	3.00	3.00	3.00
		<b>1.64</b>	<b>1.64</b>	<b>3.65</b>	<b>2.97</b>	<b>2.97</b>	<b>4.30</b>

Area	Ratios	59	60	61	62	63	64
		CMES	GSS	AFID	PSFB	HOPE	GK
Capital Adequacy	DER	1.30	4.78	3.24	0.51	12.63	20.00
	RR	0.02	0.00	0.00	0.00	0.00	0.00
		<b>1.30</b>	<b>4.73</b>	<b>3.21</b>	<b>0.52</b>	<b>12.48</b>	<b>19.76</b>
Asset Quality	CPTL	0.08	0.09	0.09	0.24	0.08	1.74
	PAR	0.04	0.02	0.00	0.00	0.00	0.07
	DSCR	1.70	1.10	1.36	8.30	1.06	0.96
	OSS	2.26	1.64	2.41	6.13	0.15	-0.15
		<b>1.79</b>	<b>1.23</b>	<b>1.67</b>	<b>6.81</b>	<b>0.62</b>	<b>0.46</b>
Mgt.	ROE	0.15	0.07	0.32	1.99	0.16	-0.42
	JAPA-ROPA	0.07	0.01	0.02	0.18	0.00	0.00
	OCAPA	0.03	0.00	0.01	0.03	0.00	0.01
	SR	0.08	0.01	0.01	0.01	0.01	0.02
	KTA	0.41	0.16	0.23	0.59	0.07	0.04
		<b>0.12</b>	<b>0.03</b>	<b>0.04</b>	<b>0.08</b>	<b>0.01</b>	<b>0.04</b>
Earnings		0.06	0.01	0.06	0.62	-0.12	-0.12
		0.48	0.21	0.29	0.59	0.07	0.08
		<b>0.45</b>	<b>0.20</b>	<b>0.28</b>	<b>0.60</b>	<b>0.05</b>	<b>0.06</b>
Liquidity	Current Ratio	2.25	2.95	1.77	0.25	1.42	1.57
	ODR	0.94	0.91	0.99	1.00	0.97	0.47
		<b>1.77</b>	<b>2.20</b>	<b>1.48</b>	<b>0.52</b>	<b>1.25</b>	<b>1.16</b>

Area	Issues	123	124	127	128	129	130
		CMES	GSS	AFID	PSFB	HOPE	GK
Com. to Social Responsibility	Response in disaster (SR1)	3.00	1.00	2.00	1.00	3.00	3.00
	Internal control (SR2)	2.00	1.00	1.00	2.00	1.00	3.00
	Interest rate (SR3)	3.00	3.00	3.00	3.00	3.00	3.00
	Cash flow Proj.(SR4)	2.00	2.00	3.00	2.00	2.00	2.00
	Over indebtness (SR5)	2.00	2.00	2.00	3.00	3.00	2.00
	Ethical practices (SR6)	2.00	2.00	3.00	2.00	2.00	3.00
		<b>2.16</b>	<b>1.55</b>	<b>1.89</b>	<b>2.17</b>	<b>2.02</b>	<b>2.63</b>
Com. to Excluded People	Progm. coverage (Ex1)	1.00	1.00	1.00	1.00	1.00	2.00
	Efficiency (Ex2)	2.00	1.00	2.00	3.00	3.00	2.00
	Insurance (Ex3)	2.00	2.00	3.00	1.00	3.00	3.00
		<b>1.56</b>	<b>1.23</b>	<b>1.80</b>	<b>1.66</b>	<b>2.13</b>	<b>2.23</b>
Com. to Good Governance	Loan classification (GG1)	3.00	4.00	4.00	4.00	4.00	3.00
	Service charge (GG2)	2.00	3.00	4.00	3.00	3.00	3.00
	Recovery (GG3)	2.00	1.00	4.00	4.00	4.00	3.00
		<b>2.30</b>	<b>2.32</b>	<b>4.00</b>	<b>3.79</b>	<b>3.79</b>	<b>3.00</b>
Com. to Poverty Reduction	Non-IT Creditting held (PR1)	3.00	5.00	4.00	3.00	1.00	3.00
	Fast AGM held (PR2)	2.00	3.00	3.00	2.00	3.00	3.00
		<b>3.31</b>	<b>5.63</b>	<b>4.30</b>	<b>3.31</b>	<b>0.31</b>	<b>2.97</b>

Area	Ratios	65	66	67	68	69	70
		SGUS	POLLI SREE	AGRAGATI	SAMADHAN	GE	UCEP
Capital Adequacy	DER	7.03	4.07	4.50	14.24	11.84	1.19
	RR	0.00	0.02	0.00	0.01	0.00	0.00
		<b>6.95</b>	<b>4.03</b>	<b>4.46</b>	<b>14.07</b>	<b>11.70</b>	<b>1.19</b>
Asset Quality	CPIL	0.08	0.12	0.19	0.08	0.08	0.05
	PAR	0.00	0.03	0.00	0.01	0.00	0.01
	DSCR	2.95	3.62	0.80	1.13	1.21	24.41
	OSS	1.80	1.45	1.09	2.08	1.79	43.54
		<b>2.27</b>	<b>2.50</b>	<b>0.85</b>	<b>1.42</b>	<b>1.34</b>	<b>30.01</b>
Mgt.	ROE	0.51	-0.03	-0.20	0.73	1.18	0.45
	IAPA-ROPA	0.01	0.07	0.01	0.06	0.02	0.01
	OCAPA	0.01	0.05	0.01	0.03	0.01	0.00
	SR	0.00	0.06	0.01	0.04	0.02	0.00
	KTA	0.10	0.18	0.17	0.06	0.08	0.23
		<b>0.00</b>	<b>0.08</b>	<b>0.04</b>	<b>0.02</b>	<b>-0.02</b>	<b>0.03</b>
Earnings		0.04	-0.01	-0.04	0.03	0.04	0.08
		0.13	0.25	0.23	0.08	0.09	0.26
		<b>0.12</b>	<b>0.23</b>	<b>0.21</b>	<b>0.08</b>	<b>0.08</b>	<b>0.25</b>
Liquidity	Current Ratio	1.75	2.03	1.61	2.84	1.67	5.33
	ODR	1.00	0.95	0.89	0.97	0.98	0.08
		<b>1.47</b>	<b>1.63</b>	<b>1.34</b>	<b>2.15</b>	<b>1.41</b>	<b>3.41</b>

Area	Issues	131	132	133	134	135	137
		SGUS	POLLI SREE	AGRAGATI	SAMADHAN	GE	UCEP
Com. to Social Responsibility	Response in disaster (SR1)	3.00	3.00	2.00	3.00	3.00	1.00
	Internal control (SR2)	2.00	3.00	2.00	3.00	3.00	1.00
	Interest rate (SR3)	3.00	3.00	2.00	3.00	4.00	4.00
	Cash flow Proj.(SR4)	2.00	3.00	2.00	3.00	3.00	3.00
	Over indebtedness (SR5)	2.00	3.00	2.00	3.00	2.00	4.00
	Ethical practices (SR6)	3.00	3.00	2.00	1.00	3.00	4.00
		<b>2.25</b>	<b>3.00</b>	<b>2.00</b>	<b>2.81</b>	<b>2.81</b>	<b>2.39</b>
Com. to Excluded People	Progn. coverage (Ex1)	2.00	3.00	2.00	4.00	1.00	1.00
	Efficiency (Ex2)	2.00	3.00	2.00	3.00	3.00	3.00
	Insurance (Ex3)	3.00	4.00	1.00	3.00	3.00	1.00
		<b>2.23</b>	<b>3.23</b>	<b>1.77</b>	<b>3.44</b>	<b>2.13</b>	<b>1.66</b>
Com. to Good Governance	Loan classification (GG1)	4.00	4.00	2.00	4.00	2.00	4.00
	Service charge (GG2)	3.00	3.00	2.00	4.00	3.00	4.00
	Reserve (GG3)	4.00	4.00	2.00	4.00	3.00	1.00
		<b>3.79</b>	<b>3.79</b>	<b>2.00</b>	<b>4.00</b>	<b>2.70</b>	<b>2.53</b>
Com. to Poverty Reduction	No. of ECs (mg. h. C4) (PR1)	6.00	6.00	1.00	6.00	4.00	1.00
	Cost AUM held (PR2)	3.00	3.00	1.00	3.00	3.00	3.00
		<b>6.97</b>	<b>6.97</b>	<b>0.99</b>	<b>6.97</b>	<b>4.30</b>	<b>0.31</b>

		71	72	73	74	75	76
Area	Ratios	NDP	FDSR	HFSKS	SDUP	ENDEAVOUR	VDF
Capital Adequacy	DFR	5.04	3.81	9.22	33.36	9.39	40.01
	RR	0.02	0.00	0.02	0.02	0.00	0.00
		<b>4.99</b>	<b>3.77</b>	<b>9.12</b>	<b>32.95</b>	<b>9.29</b>	<b>39.51</b>
Asset Quality	CPL	0.14	0.12	0.14	0.28	0.12	0.09
	PAR	0.01	0.00	0.02	0.12	0.00	0.03
	BSCR	5.37	5.82	0.66	0.96	0.99	1.01
	BSS	1.67	1.37	0.97	1.04	1.52	1.32
		<b>3.51</b>	<b>3.63</b>	<b>0.73</b>	<b>0.93</b>	<b>1.12</b>	<b>1.06</b>
Mgt.	ROE	0.23	0.11	-0.54	-0.06	-0.03	0.13
	IAPA-ROPA	0.21	0.00	0.06	0.03	0.02	0.02
	OCAPA	0.12	0.00	0.06	0.03	0.02	0.01
	SR	0.16	0.00	0.07	0.05	0.02	0.03
	KTA	0.16	0.18	0.03	0.03	0.15	0.04
		<b>0.16</b>	<b>0.03</b>	<b>0.08</b>	<b>0.04</b>	<b>0.05</b>	<b>0.02</b>
Earnings		0.03	0.02	-0.02	-0.02	0.00	0.00
		0.20	0.21	0.04	0.03	0.13	0.05
		<b>0.19</b>	<b>0.19</b>	<b>0.04</b>	<b>0.03</b>	<b>0.12</b>	<b>0.05</b>
Liquidity	Current Ratio	1.75	1.58	2.47	1.33	1.68	2.50
	ODR	1.01	1.05	0.95	0.47	0.96	0.96
		<b>1.48</b>	<b>1.38</b>	<b>1.91</b>	<b>1.01</b>	<b>1.41</b>	<b>1.93</b>

		138	139	141	142	143	145
Area	Issues	NDP	FDSR	HFSKS	SDUP	ENDEAVOUR	VDF
Com. to Social Responsibility	Response in disaster (SR1)	4.00	3.00	4.00	3.00	3.00	3.00
	Internal control (SR2)	3.00	1.00	3.00	3.00	3.00	1.00
	Interest rate (SR3)	4.00	4.00	4.00	3.00	3.00	3.00
	Cash flow Proj.(SR4)	3.00	1.00	3.00	2.00	3.00	1.00
	Over Indebtness (SR5)	3.00	2.00	4.00	2.00	2.00	2.00
	Ethical practices (SR6)	3.00	3.00	4.00	3.00	3.00	2.00
		<b>3.16</b>	<b>1.79</b>	<b>3.49</b>	<b>2.63</b>	<b>2.76</b>	<b>1.65</b>
Com. to Excluded People	Progm. coverage (Ex1)	3.00	1.00	1.00	2.00	3.00	2.00
	Efficiency (Ex2)	3.00	4.00	3.00	2.00	3.00	2.00
	Insurance (Ex3)	3.00	4.00	3.00	3.00	3.00	2.00
		<b>3.00</b>	<b>2.69</b>	<b>2.13</b>	<b>2.23</b>	<b>3.00</b>	<b>2.00</b>
Com. to Good Governance	Loan classification (GG1)	4.00	3.00	4.00	3.00	4.00	1.00
	Service charges (GG2)	3.00	3.00	4.00	3.00	3.00	2.00
	Reserve (GG3)	4.00	3.00	4.00	4.00	4.00	2.00
		<b>3.79</b>	<b>3.00</b>	<b>4.00</b>	<b>3.49</b>	<b>3.79</b>	<b>1.70</b>
Com. to Poverty Reduction	No. of LC meeting held (PR1)	2.00	3.00	2.00	6.00	1.00	5.00
	Last AGM held (PR2)	3.00	3.00	2.00	3.00	3.00	3.00
		<b>1.64</b>	<b>2.97</b>	<b>1.98</b>	<b>6.97</b>	<b>0.31</b>	<b>5.63</b>

		77	78	79	80	81	82
Area	Ratios	DDJ	CARSA	DISA	SAVIOUR	GRAMAUS	PBK
Capital Adequacy	DER	7.86	5.84	11.72	23.00	0.14	0.15
	RR	0.02	0.01	0.00	0.00	0.01	0.06
		<b>7.77</b>	<b>5.78</b>	<b>11.58</b>	<b>22.72</b>	<b>0.15</b>	<b>0.16</b>
Asset Quality	CPIL	0.10	0.09	0.07	0.17	0.10	0.12
	PAR	0.04	0.03	0.01	0.00	0.01	0.03
	DSCR	1.08	2.21	1.07	0.95	0.86	0.87
	OSS	1.24	1.55	1.72	0.98	1.47	1.33
		<b>1.06</b>	<b>1.79</b>	<b>1.24</b>	<b>0.89</b>	<b>1.03</b>	<b>0.99</b>
Mgt.	ROE	0.19	0.00	0.72	-0.87	0.50	-0.51
	IAPA= ROPA	0.20	0.06	0.11	0.00	0.11	0.15
	OCAPA	0.16	0.04	0.06	0.00	0.08	0.11
	SR	0.00	0.00	0.11	0.00	0.10	0.18
	KTA	0.11	0.14	0.08	0.04	0.06	0.05
		<b>0.09</b>	<b>0.05</b>	<b>0.07</b>	<b>0.04</b>	<b>0.07</b>	<b>0.17</b>
Earnings		0.02	0.00	0.04	-0.06	0.02	0.00
		0.15	0.17	0.08	0.04	0.06	0.06
		<b>0.14</b>	<b>0.16</b>	<b>0.08</b>	<b>0.04</b>	<b>0.06</b>	<b>0.05</b>
Liquidity	Current Ratio	2.53	5.44	1.36	1.18	1.39	1.44
	ODR	0.97	0.00	1.00	0.98	0.97	0.91
		<b>1.96</b>	<b>3.45</b>	<b>1.22</b>	<b>1.10</b>	<b>1.23</b>	<b>1.24</b>

		147	148	149	150	151	152
Area	Issues	DDJ	CARSA	DISA	SAVIOUR	GRAMAUS	PBK
Com. to Social Responsibility	Response in disaster (SR1)	3.00	2.00	2.00	3.00	3.00	1.00
	Internal control (SR2)	3.00	2.00	2.00	1.00	2.00	1.00
	Interest rate (SR3)	4.00	2.00	3.00	3.00	3.00	4.00
	Cash flow Proj.(SR4)	4.00	2.00	3.00	2.00	3.00	3.00
	Over indebtedness (SR5)	2.00	1.00	2.00	2.00	3.00	1.00
	Ethical practices (SR6)	2.00	2.00	1.00	2.00	3.00	1.00
		<b>2.84</b>	<b>1.76</b>	<b>2.08</b>	<b>1.78</b>	<b>2.62</b>	<b>1.39</b>
Com. to Excluded People	Progm. coverage (Ex1)	4.00	2.00	1.00	1.00	2.00	3.00
	Efficiency (Ex2)	3.00	2.00	2.00	2.00	2.00	1.00
	Insurance (Ex3)	4.00	1.00	1.00	2.00	3.00	3.00
		<b>3.67</b>	<b>1.77</b>	<b>1.33</b>	<b>1.56</b>	<b>2.23</b>	<b>2.34</b>
Com. to Good Governance	Loan classification (GG1)	3.00	2.00	2.00	4.00	4.00	4.00
	Service charge (GG2)	3.00	2.00	2.00	3.00	3.00	4.00
	Reserve (GG3)	4.00	2.00	2.00	3.00	4.00	1.00
		<b>3.49</b>	<b>2.00</b>	<b>2.00</b>	<b>3.30</b>	<b>3.79</b>	<b>2.53</b>
Com. to Poverty Reduction	Nos of EC meeting held (PR1)	4.00	4.00	2.00	2.00	6.00	2.00
	Past AGM held (PR2)	3.00	2.00	3.00	3.00	3.00	3.00
		<b>4.30</b>	<b>4.64</b>	<b>1.64</b>	<b>1.64</b>	<b>6.97</b>	<b>1.64</b>

		83	84	85	86	87	88
Area	Ratios	Unnayan	BEES	DNP	PIPASA	PROGRESS	ASPADA
Capital Adequacy	DFR	3.58	13.04	4.34	14.28	16.15	5.37
	RR	0.13	0.02	0.00	0.01	0.02	0.01
		<b>3.55</b>	<b>12.89</b>	<b>4.30</b>	<b>14.11</b>	<b>15.96</b>	<b>5.31</b>
Asset Quality	CDL	0.12	0.16	0.36	10.87	0.11	0.09
	PAR	0.85	1.05	0.00	0.02	0.04	0.00
	DSUR	1.08	0.87	0.94	2.80	0.98	1.14
	OSS	2.29	0.96	0.78	-5.82	1.34	1.62
		<b>1.54</b>	<b>0.92</b>	<b>0.81</b>	<b>-0.79</b>	<b>1.05</b>	<b>1.24</b>
Mgt.	ROE	0.18	-0.44	-0.66	-0.13	-0.15	0.30
	IAPA- ROPA	0.20	0.17	0.00	0.04	0.09	0.35
	OCAPA	0.09	0.18	0.01	-0.01	0.07	0.22
	SR	0.34	0.26	0.00	0.03	0.08	0.00
	KTA	0.21	0.09	0.09	0.09	0.06	0.15
		<b>0.24</b>	<b>0.22</b>	<b>0.05</b>	<b>0.04</b>	<b>0.09</b>	<b>0.14</b>
Earnings		0.03	-0.04	-0.09	-0.01	-0.01	0.04
		0.25	0.08	0.15	0.05	0.06	0.17
		<b>0.24</b>	<b>0.07</b>	<b>0.14</b>	<b>0.05</b>	<b>0.06</b>	<b>0.16</b>
Liquidity	Current Ratio	1.73	1.58	0.73	3.52	1.44	1.60
	ODR	0.94	0.92	0.87	0.16	0.92	1.00
		<b>1.43</b>	<b>1.34</b>	<b>0.78</b>	<b>2.29</b>	<b>1.25</b>	<b>1.38</b>

		33	7	160	165	168	169
Area	Issues	Unnayan	BEES	DNP	PIPASA	PROGRESS	ASPADA
Com. to Social Responsibility	Response in disaster (SR1)	3.00	1.00	3.00	2.00	1.00	4.00
	Internal control (SR2)	2.00	3.00	3.00	1.00	3.00	3.00
	Interest rate (SR3)	3.00	3.00	3.00	1.00	4.00	4.00
	Cash flow Proj.(SR4)	3.00	3.00	2.00	2.00	4.00	3.00
	Over indebtedness (SR5)	3.00	3.00	2.00	2.00	3.00	1.00
	Ethical practices (SR6)	3.00	3.00	3.00	3.00	4.00	4.00
		<b>2.62</b>	<b>2.77</b>	<b>2.63</b>	<b>1.67</b>	<b>3.04</b>	<b>2.77</b>
Com. to Excluded People	Progn. coverage (Ex1)	3.00	2.00	2.00	1.00	4.00	3.00
	Efficiency (Ex2)	2.00	3.00	2.00	2.00	4.00	3.00
	Insurance (Ex3)	1.00	3.00	3.00	3.00	3.00	3.00
		<b>2.20</b>	<b>2.56</b>	<b>2.23</b>	<b>1.80</b>	<b>3.77</b>	<b>3.00</b>
Com. to Good Governance	Loan classification (GG1)	3.00	3.00	4.00	4.00	4.00	4.00
	Service charge (GG2)	4.00	4.00	3.00	4.00	4.00	3.00
	Reserve (GG3)	4.00	2.00	4.00	4.00	3.00	4.00
		<b>3.70</b>	<b>2.72</b>	<b>3.79</b>	<b>4.00</b>	<b>3.51</b>	<b>3.79</b>
Com. to Poverty Reduction	No. of EC in the field (PR1)	5.00	6.00	6.00	6.00	2.00	1.00
	Last AGM held (PR2)	3.00	3.00	3.00	3.00	3.00	2.00
		<b>5.63</b>	<b>6.97</b>	<b>6.97</b>	<b>6.97</b>	<b>1.64</b>	<b>0.65</b>

		89	90	91	92	93	94
Area	Ratios	HUS	PUS	RESCU	DUS	KKS	PCD
Capital Adequacy	D/R	8.20	1.04	21.37	6.33	5.37	4.10
	IR	0.00	0.00	0.00	0.02	0.01	0.03
		<b>8.11</b>	<b>1.04</b>	<b>21.11</b>	<b>6.26</b>	<b>5.31</b>	<b>4.06</b>
Asset Quality	GP1L	0.21	0.58	0.16	0.14	0.18	0.26
	PAR	0.00	0.04	0.00	0.02	0.02	0.03
	DSCR	1.18	1.57	0.95	1.09	0.40	0.98
	OSS	2.19	0.84	1.32	1.42	1.36	0.60
		<b>1.49</b>	<b>1.17</b>	<b>1.02</b>	<b>1.14</b>	<b>0.75</b>	<b>0.76</b>
Mgt.	ROE	0.57		0.46	0.04	0.33	-1.06
	IAPA= ROPA	0.04	0.00	0.01	0.10	0.03	0.08
	OCAPA	0.02	0.00	0.01	0.07	0.02	0.13
	SR	0.04	0.01	0.01	0.07	0.02	0.05
	KTA	0.11	0.36	0.04	0.13	0.41	0.18
		<b>0.02</b>	<b>0.07</b>	<b>0.00</b>	<b>0.09</b>	<b>0.08</b>	<b>0.14</b>
Earnings		0.05	-0.01	-0.02	0.03	-0.06	-0.18
		0.12	-0.39	0.05	0.16	0.15	0.22
		<b>0.12</b>	<b>-0.37</b>	<b>0.05</b>	<b>0.15</b>	<b>0.14</b>	<b>0.19</b>
Liquidity	Current Ratio	3.05	1.23	2.40	1.49	1.00	1.90
	ODR	0.87	0.77	0.91	0.97	0.88	0.93
		<b>2.25</b>	<b>1.06</b>	<b>1.85</b>	<b>1.29</b>	<b>0.95</b>	<b>1.54</b>

		170	172	173	174	175	176
Area	Issues	HUS	PUS	RESCU	DUS	KKS	PCD
Com. to Social Responsibility	Response in disaster (SR1)	2.00	3.00	1.00	4.00	1.00	2.00
	Internal control (SR2)	1.00	1.00	1.00	3.00	1.00	3.00
	Interest rate (SR3)	3.00	3.00	3.00	4.00	3.00	3.00
	Cash flow Proj.(SR4)	2.00	3.00	2.00	3.00	2.00	2.00
	Over indebtedness (SR5)	3.00	3.00	2.00	3.00	3.00	3.00
	Ethical practices (SR6)	2.00	3.00	2.00	2.00	3.00	3.00
		<b>1.90</b>	<b>2.24</b>	<b>1.55</b>	<b>3.06</b>	<b>1.88</b>	<b>2.76</b>
Com. to Excluded People	Progm. coverage (Ex1)	2.00	1.00	1.00	3.00	3.00	2.00
	Efficiency (Ex2)	3.00	3.00	1.00	3.00	1.00	2.00
	Insurance (Ex3)	3.00	3.00	2.00	3.00	3.00	3.00
		<b>2.56</b>	<b>2.13</b>	<b>1.23</b>	<b>3.00</b>	<b>2.34</b>	<b>2.23</b>
Com. to Good Governance	Loan classification (GG1)	2.00	2.00	2.00	4.00	3.00	4.00
	Service charge (GG2)	3.00	3.00	2.00	4.00	4.00	3.00
	Reserve (GG3)	3.00	3.00	1.00	4.00	2.00	4.00
		<b>2.70</b>	<b>2.70</b>	<b>1.51</b>	<b>4.00</b>	<b>2.72</b>	<b>3.79</b>
Com. to Poverty Reduction	Non-FG meeting held (PR1)	4.00	3.00	6.00	1.00	1.00	3.00
	Fast ACM held (PR2)	3.00	3.00	3.00	3.00	1.00	2.00
		<b>4.30</b>	<b>2.97</b>	<b>6.97</b>	<b>0.31</b>	<b>0.99</b>	<b>3.31</b>

		95	96	97	98	99	100
Area	Ratios	NAZIR	LA	PPD	FS	GKF	ST
Capital Adequacy	DER	3.90	4.72	1.34	12.61	10.03	14.74
	RR	0.00	0.00	0.01	0.00	0.00	0.03
		<b>3.86</b>	<b>4.67</b>	<b>1.34</b>	<b>12.46</b>	<b>9.91</b>	<b>14.56</b>
Asset Quality	GPLL	0.17	0.09	0.08	0.09	0.07	0.10
	PAR	0.00	0.00	0.00	0.00	0.01	0.19
	DSCR	1.38	1.10	1.38	1.08	1.17	1.04
	OSS	0.93	1.38	2.24	1.55	2.54	1.41
		<b>1.10</b>	<b>1.13</b>	<b>1.61</b>	<b>1.18</b>	<b>1.62</b>	<b>1.12</b>
Mgt.	ROE	0.07	0.09	0.23	0.45	0.62	0.25
	IAPA- ROPA	0.01	0.00	0.11	0.02	0.06	0.18
	OCAPA	0.01	0.00	0.05	0.01	0.02	0.13
	SR	0.01	0.00	0.03	0.02	0.11	0.10
	KTA	1.27	0.16	0.41	0.07	0.08	0.06
		<b>0.23</b>	<b>0.03</b>	<b>0.11</b>	<b>0.01</b>	<b>0.06</b>	<b>0.11</b>
Earnings		-0.15	0.01	0.09	0.03	0.04	0.01
		0.21	0.22	0.49	0.09	9.17	0.07
		<b>0.19</b>	<b>0.21</b>	<b>0.46</b>	<b>0.08</b>	<b>8.57</b>	<b>0.07</b>
Liquidity	Current Ratio	2.18	0.67	2.18	1.65	1.13	2.22
	ODR	1.00	0.83	0.99	1.00	0.97	0.83
		<b>1.74</b>	<b>0.73</b>	<b>1.74</b>	<b>1.41</b>	<b>1.07</b>	<b>1.71</b>

		178	179	180	181	182	184
Area	Issues	NAZIR	LA	PPD	FS	GKF	ST
Com. to Social Responsibility	Response in disaster (SR1)	2.00	2.00	2.00	2.00	1.00	4.00
	Internal control (SR2)	1.00	1.00	2.00	2.00	3.00	2.00
	Interest rate (SR3)	4.00	3.00	3.00	3.00	2.00	3.00
	Cash flow Proj.(SR4)	2.00	1.00	2.00	1.00	1.00	2.00
	Over indebtedness (SR5)	3.00	2.00	3.00	2.00	2.00	3.00
	Ethical practices (SR6)	3.00	2.00	3.00	3.00	2.00	2.00
		<b>2.04</b>	<b>1.53</b>	<b>2.38</b>	<b>2.01</b>	<b>2.14</b>	<b>2.51</b>
Com. to Excluded People	Progm. coverage (Ex1)	1.00	1.00	2.00	2.00	1.00	3.00
	Efficiency (Ex2)	2.00	3.00	2.00	1.00	1.00	2.00
	Insurance (Ex3)	3.00	1.00	2.00	3.00	1.00	3.00
		<b>1.80</b>	<b>1.66</b>	<b>2.00</b>	<b>1.90</b>	<b>1.00</b>	<b>2.67</b>
Com. to Good Governance	Loan classification (GG1)	2.00	2.00	3.00	3.00	1.00	4.00
	Service charge (GG2)	3.00	2.00	3.00	3.00	2.00	2.00
	Reserve (GG3)	3.00	2.00	4.00	3.00	1.00	3.00
		<b>2.70</b>	<b>2.00</b>	<b>3.49</b>	<b>3.00</b>	<b>1.21</b>	<b>3.09</b>
Com. to Poverty Reduction	Nos of EC meeting held (PR1)	1.00	3.00	2.00	3.00	6.00	3.00
	Last AGM held (PR2)	3.00	3.00	3.00	1.00	3.00	3.00
		<b>0.31</b>	<b>2.97</b>	<b>1.64</b>	<b>3.65</b>	<b>6.97</b>	<b>2.97</b>



		101	102	103	104		105
Area	Ratios	AVA	ANUVAB	SANGRAM	UP	Mean	TMSS
Capital Adequacy	DFR	26.21	1.61	16.18	8.09	8.73	3.50
	RR	0.00	0.01	0.06	0.15	0.02	0.05
		<b>25.89</b>	<b>1.60</b>	<b>15.99</b>	<b>8.00</b>		<b>3.47</b>
Asset Quality	OPTL	0.09	1.55	0.10	0.15	0.27	0.11
	PAR	0.00	0.01	0.18	0.00	0.06	0.04
	NSCR	1.05	0.38	1.08	0.91	2.36	1.03
	OSS	1.32	1.57	2.11	1.77	2.15	1.33
		<b>1.08</b>	<b>0.82</b>	<b>1.41</b>	<b>1.18</b>	<b>2.10</b>	<b>1.07</b>
Mgt.	ROE	0.38	-2.00	0.47	-0.28	0.25	0.04
	IAPA-ROPA	0.02	0.00	0.25	0.18	0.08	0.21
	OCAPA	0.02	0.00	0.12	0.10	0.05	0.16
	SR	0.02	0.00	0.20	0.31	0.07	0.39
	KTA	0.04	-0.63	0.06	0.10	0.16	0.21
		<b>0.01</b>	<b>-0.03</b>	<b>0.16</b>	<b>0.23</b>	<b>0.08</b>	<b>0.29</b>
Earnings		0.01	-0.63	0.02	-0.03	0.03	0.01
		0.05	-0.66	0.06	0.12	0.32	0.23
		<b>0.04</b>	<b>-0.66</b>	<b>0.06</b>	<b>0.11</b>	<b>0.30</b>	<b>0.21</b>
Liquidity	Current Ratio	1.36	0.29	1.66	1.63	1.83	1.59
	ODR	0.98	0.49	0.88	0.93	0.90	0.90
		<b>1.22</b>	<b>0.36</b>	<b>1.37</b>	<b>1.37</b>	<b>1.48</b>	<b>1.33</b>

		186	187	189	34		37
Area	Issues	AVA	ANUVAB	SANGRAM	UP	Mean	TMSS
Com. to Social Responsibility	Response in disaster (SR1)	1.00	1.00	3.00	3.00	2.63	5.00
	Internal control (SR2)	2.00	1.00	3.00	1.00	2.08	5.00
	Interest rate (SR3)	3.00	4.00	4.00	3.00	3.18	5.00
	Cash flow Proj.(SR4)	2.00	1.00	3.00	3.00	2.31	4.00
	Over indebtedness (SR5)	2.00	2.00	3.00	3.00	2.33	4.00
	Ethical practices (SR6)	2.00	2.00	3.00	3.00	2.71	4.00
		<b>1.93</b>	<b>1.46</b>	<b>3.04</b>	<b>2.24</b>	<b>2.34</b>	<b>4.54</b>
Com. to Excluded People	Prog. coverage (Ex1)	1.00	1.00	3.00	1.00	1.85	4.00
	Efficiency (Ex2)	2.00	3.00	3.00	3.00	2.40	4.00
	Insurance (Ex3)	1.00	1.00	3.00	3.00	2.67	3.00
		<b>1.33</b>	<b>1.66</b>	<b>3.00</b>	<b>2.13</b>	<b>2.22</b>	<b>3.77</b>
Com. to Good Governance	Loan classification (GG1)	3.00	1.00	4.00	4.00	3.21	4.00
	Service to firm (GG2)	3.00	1.00	3.00	3.00	3.05	3.00
	Reserve (GG3)	4.00	1.00	4.00	4.00	3.15	4.00
		<b>3.49</b>	<b>1.00</b>	<b>3.79</b>	<b>3.79</b>	<b>3.15</b>	<b>3.79</b>
Com. to Poverty Reduction	No. of ECG meeting held (PR1)	4.00	3.00	5.00	4.00	3.46	1.00
	Last AGM held (PR2)	3.00	3.00	3.00	3.00	2.82	3.00
		<b>4.30</b>	<b>2.97</b>	<b>5.63</b>	<b>4.30</b>	<b>3.65</b>	<b>0.31</b>

		106	107	108	109	110	111
Area	Ratios	RRF	SSS	Uddipan	Swanirvar	JCF	ASA
Capital Adequacy	DER	13.21	8.70	15.25	7.78	8.07	0.86
	RR	0.06	0.05	0.03	0.13	0.12	0.04
		<b>13.05</b>	<b>8.60</b>	<b>15.07</b>	<b>7.69</b>	<b>7.98</b>	<b>0.86</b>
Asset Quality	CPII	0.14	0.10	0.10	0.13	0.12	0.07
	PAR	0.28	0.06	0.05	0.31	0.13	0.10
	DSCR	0.94	1.10	1.02	1.30	1.05	3.92
	ONS	1.24	1.57	1.36	1.43	1.82	1.83
		<b>1.01</b>	<b>1.20</b>	<b>1.08</b>	<b>1.28</b>	<b>1.28</b>	<b>2.81</b>
Mgt.	ROE	-0.25	0.29	0.06	0.11	0.20	0.13
	LAPA-ROPA	0.19	0.21	0.19	0.13	0.18	0.19
	OCAPA	0.15	0.13	0.14	0.09	0.10	0.11
	SR	0.26	0.38	0.41	0.22	0.34	0.01
	KTA	0.11	0.09	0.09	0.10	0.10	0.54
Earnings		<b>0.21</b>	<b>0.25</b>	<b>0.26</b>	<b>0.16</b>	<b>0.22</b>	<b>0.16</b>
		-0.01	0.02	0.00	0.01	0.02	0.07
		0.08	0.13	0.07	0.12	0.14	0.55
Liquidity		<b>0.08</b>	<b>0.12</b>	<b>0.07</b>	<b>0.11</b>	<b>0.14</b>	<b>0.52</b>
	Current Ratio	1.87	2.10	1.73	2.29	1.59	1.49
	CLR	0.93	0.98	0.98	0.87	0.93	0.99
		<b>1.52</b>	<b>1.69</b>	<b>1.45</b>	<b>1.77</b>	<b>1.34</b>	<b>1.30</b>

		38	39	40	41	42	
Area	Issues	RRF	SSS	Uddipan	Swanirvar	JCF	ASA
Com. to Social Responsibility	Response in disaster (SR1)	1.00	3.00	4.00	1.00	2.00	4.00
	Internal control (SR2)	4.00	3.00	3.00	1.00	4.00	5.00
	Interest rate (SR3)	1.00	4.00	3.00	3.00	1.00	5.00
	Cash flow Proj.(SR4)	1.00	3.00	1.00	3.00	1.00	5.00
	Over indebtedness (SR5)	4.00	3.00	2.00	3.00	1.00	5.00
	Ethical practices (SR6)	1.00	3.00	3.00	3.00	1.00	5.00
		<b>2.86</b>	<b>3.04</b>	<b>2.62</b>	<b>2.01</b>	<b>2.26</b>	<b>4.89</b>
Com. to Excluded People	Progm. coverage (Ex1)	4.00	3.00	2.00	2.00	4.00	5.00
	Efficiency (Ex2)	4.00	3.00	2.00	3.00	4.00	5.00
	Insurance (Ex3)	4.00	3.00	2.00	3.00	4.00	5.00
		<b>4.00</b>	<b>3.00</b>	<b>2.00</b>	<b>2.56</b>	<b>4.00</b>	<b>5.00</b>
Com. to Good Governance	Loan classification (GG1)	2.00	4.00	4.00	3.00	2.00	4.00
	Service charge (GG2)	2.00	3.00	3.00	3.00	2.00	5.00
	Reserve (GG3)	2.00	4.00	4.00	3.00	2.00	5.00
		<b>2.00</b>	<b>3.79</b>	<b>3.79</b>	<b>3.00</b>	<b>2.00</b>	<b>4.70</b>
Com. to Poverty Reduction	Net of C. in chng. held (PR1)	6.00	2.00	2.00	2.00	4.00	3.00
	Last A/M held (PR2)	3.00	3.00	3.00	2.00	4.00	3.00
		<b>6.97</b>	<b>1.64</b>	<b>1.64</b>	<b>1.98</b>	<b>3.96</b>	<b>2.97</b>

		112		OOSA	BIPOOL
Area	Ratios	BRAC	Mean	Mean	Mean
Capital Adequacy	DFR	4.60	7.75	8.73	7.75
	RR	0.01	0.06	0.02	0.06
		4.55			
Asset Quality	CEI	0.12	0.11	0.27	0.11
	PAR	0.14	0.14	0.06	0.14
	DSCR	3.92	1.79	2.36	1.79
	GSS	1.28	1.48	2.15	1.48
		2.60			
Mgt.	ROE	0.04	0.08	0.25	0.08
	IAPA= ROPA	0.21	0.19	0.08	0.19
	OCAPA	0.16	0.13	0.05	0.13
	SR	0.42	0.30	0.07	0.30
	KTA	0.18	0.18	0.16	0.18
		0.30	0.23	0.08	0.23
Earnings		0.01	0.02	0.03	0.02
		0.18	0.19	0.32	0.19
		0.17	0.18	0.30	0.18
Liquidity	Current Ratio	1.49	1.77	1.83	1.77
	ODR	0.99	0.95	0.90	0.95
		1.30	15.53	17.25	15.12

				OOSA	BIPOOL
Area	Issues	BRAC	Mean	Mean	Mean
Com. to Social Responsibility	Response in disaster (SR1)	5.00	3.13	2.63	3.13
	Internal control (SR2)	5.00	3.75	2.08	3.75
	Interest rate (SR3)	5.00	3.38	3.18	3.38
	Cash flow Proj.(SR4)	5.00	2.88	2.31	2.88
	Over indebtedness (SR5)	5.00	3.38	2.33	3.38
	Ethical practices (SR6)	5.00	3.13	2.71	3.13
		5.00			
Com. to Excluded People	Progm. coverage (Ex1)	5.00	3.63	1.85	3.63
	Efficiency (Ex2)	5.00	3.75	2.40	3.75
	Insurance (Ex3)	5.00	3.63	2.67	3.63
		5.00			
Com. to Good Governance	Loan classification (GG1)	5.00	3.50	3.21	3.50
	Service charge (GG2)	5.00	3.25	3.05	3.25
	Reserve (GG3)	5.00	3.63	3.15	3.63
		5.00			
Com. to Poverty Reduction	No. of EC meeting held (PR1)	2.00	2.75	3.46	2.75
	Last AGM held (PR2)	3.00	3.00	2.82	3.00
		1.64		37.85	46.75

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Overall Data (Level-I and Level-II) of 112 POs											
SL No	PO Name and	Category	YOS	NoECMT	AGM	WA	PST	SoF	NBrP	NBrNP	Nsam
1	Ad-din	1	5	4	1	5	1	1	0	0	0
2	AFAUS	1	4	6	1	4	2	1	0	0	0
3	Prodipan	1	5	3	1	5	1	1	14	0	44
4	PSKS	1	7	5	1	5	2	1	12	0	0
5	SJK	1	6	3	1	7	1	1	5	0	4
6	BASTAB	1	3	2	1	4	2	1	4	0	6
7	SACHETAN	1	5	3	1	4	2	1	7	0	0
8	GKT	1	5	2	1	2	2	1	39	0	33
9	CREED	1	5	4	1	2	2	1	3	0	16
10	AF	1	5	5	1	8	1	1	21	0	20
11	HELP	1	4	3	1	5	2	1	31	0	21
12	MUK	1	4	3	1	3	1	1	10	0	17
13	ROVA	1	4	1	3	5	2	2	3	4	0
14	NABOLOK	1	4	2	1	5	1	1	10	0	23
15	BSDO	1	5	2	1	4	1	1	3	0	22
16	ATMABISW	1	4	3	1	5	1	1	24	0	64
17	VARD	1	5	2	2	6	1	2	29	9	1
18	NELS	1	3	3	1	4	1	1	3	0	0
19	SSUS	1	4	4	1	4	1	1	2	0	19
20	DDAN	1	4	4	1	4	1	1	1	0	1
21	ASUK	1	4	3	1	7	1	1	1	0	6
22	PDO	1	2	6	1	4	1	1	0	0	0
23	MBSK	1	7	3	1	4	1	1	11	0	43
24	TSSS	1	5	3	1	4	1	1	1	0	0
25	PMUS	1	3	2	1	4	2	1	9	0	0
26	DORP	1	5	4	1	8	2	1	7	0	11
27	SUS1	1	5	3	1	5	1	1	8	0	75
28	AHDO	1	3	3	1	5	2	1	12	0	42
29	ACD	1	5	3	1	4	1	1	4	0	0
30	SAPB	1	5	2	1	8	2	2	9	9	25
31	JRDM	1	3	3	1	4	1	1	21	0	195
32	ARCHES	1	4	2	1	4	2	1	9	0	68
33	JF	1	4	4	1	4	2	1	35	0	339
34	CEDAR	1	4	3	1	2	1	1	8	0	46
35	ASO	1	2	4	1	4	1	1	4	0	41
36	NEF	1	2	3	1	4	1	1	3	0	24
37	DBS	1	4	6	1	5	2	2	14	4	0
38	GUP	1	7	5	1	2	2	1	13	0	12
39	KPUS	1	6	5	1	5	1	1	14	4	0
40	NUSA	1	6	4	1	2	2	1	15	0	116
41	JKS	1	6	4	1	5	1	1	13	0	25
42	BEDO	1	4	6	1	2	1	1	1	0	59
43	BERDO	1	4	4	1	2	2	2	1	2	0
44	CODEC	1	5	2	1	3	1	2	5	46	0
45	ALWO	1	3	5	2	4	1	1	3	0	0
46	MAMATA	1	5	3	1	3	2	1	1	0	8
47	MUKTI	1	3	6	1	3	1	1	10	0	46
48	SUS2	1	4	3	1	2	1	1	10	0	0
49	SRYZONY	1	5	5	1	5	2	1	35	0	50
50	SOJAG	1	5	2	1	2	1	1	10	0	930
51	BRIDGE	1	3	2	1	5	2	1	4	10	0
52	SPUS	1	5	5	2	2	1	1	3	0	30
53	SHATAPHO	1	2	6	1	4	1	1	8	0	0
54	SUSS	1	4	2	1	2	2	1	7	0	11
55	DAM	1	7	2	1	2	2	1	27	0	135
56	EWf	1	6	2	1	7	2	1	11	0	0
57	ARAB	1	4	3	3	2	2	1	11	0	7
58	ANTAR	1	2	3	1	3	1	1	4	0	0
59	CMES	1	6	3	1	8	1	1	23	0	25
60	GSS	1	4	4	1	2	2	1	1	0	0
61	AFID	1	4	3	2	3	1	1	1	0	0

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Overall Data (Level-I and Level-II) of 112 POs											
SL No	PO Name and	Category	YOS	NoECMT	AGM	WA	PST	SoF	NBRP	NBRNP	Nsam
62	PSFB	1	5	5	1	4	2	1	4	0	5
63	HOPE	1	3	4	1	3	2	1	1	0	4
64	GK	1	6	3	2	8	2	2	11	2	17
65	SGUS	1	2	1	1	4	2	1	2	0	0
66	POLLISR	1	4	3	1	4	2	1	11	0	54
67	AGRAGATI	1	4	6	1	5	2	2	2	2	0
68	SAMADHAN	1	4	6	1	5	1	1	6	0	47
69	GE	1	2	1	3	3	1	1	5	0	21
70	UCEP	1	7	6	1	2	1	2	2	3	13
71	NDP	1	3	4	1	4	2	1	26	0	12
72	FDSR	1	5	1	1	4	1	1	1	0	0
73	HFSKS	1	5	2	1	7	1	1	15	0	306
74	SPUP	1	6	3	1	5	1	1	11	0	123
75	ENDEAVOU	1	3	2	2	6	2	1	5	0	32
76	VDF	1	3	6	1	5	2	1	0	0	14
77	DDJ	1	6	1	1	7	2	1	25	0	123
78	CARSA	1	4	5	1	2	2	1	10	0	9
79	DISA	1	3	4	1	3	2	1	12	0	36
80	SAVIOUR	1	2	4	2	5	1	1	2	0	0
81	GRAMAUS	1	5	2	1	2	2	1	12	0	163
82	PBK	1	4	2	1	2	2	1	25	0	29
83	Unnayan	1	5	6	1	5	2	1	8	0	110
84	BEES	1	4	2	1	3	2	1	21	0	0
85	DNP	1	4	5	1	2	1	1	1	0	6
86	PIPASA	1	5	6	1	5	2	1	7	0	406
87	PROGRESS	1	4	6	1	2	2	1	19	0	0
88	ASPADA	1	4	6	1	2	2	1	29	0	0
89	HUS	1	2	2	1	6	2	1	1	0	50
90	PUS	1	3	1	2	6	1	2	1	0	11
91	RESCU	1	3	4	1	4	1	1	2	0	1
92	DUS	1	5	3	1	3	2	1	17	0	126
93	KKS	1	2	6	1	2	2	1	7	0	8
94	PCD	1	5	1	1	4	2	1	14	0	108
95	NAZIR	1	2	1	3	4	1	1	1	0	4
96	LA	1	3	3	2	5	1	1	2	0	0
97	PPD	1	4	1	1	4	1	1	7	0	0
98	FS	1	3	3	1	4	2	1	3	0	4
99	GKF	1	4	2	1	4	1	1	20	0	481
100	ST	1	5	3	3	7	2	1	22	0	342
101	AVA	1	2	6	1	4	2	1	5	0	51
102	ANUVAB	1	4	3	1	4	1	1	1	0	7
103	SANGRAM	1	4	4	1	7	2	2	25	3	33
104	UP	1	3	3	1	5	2	1	5	0	34
105	TMSS	2	6	5	1	8	2	1	453	0	166
106	RRF	2	6	4	1	8	2	1	98	0	447
107	SSS	2	5	3	1	8	2	2	194	10	610
108	Uddipan	2	5	2	1	8	2	1	146	0	1488
109	Swanirva	2	7	1	1	8	2	1	17	0	43
110	JCF	2	6	6	1	8	2	1	211	0	1551
111	ASA	2	6	2	1	1	2	2	524	1288	169
112	BRAC	2	7	2	1	1	2	2	595	2575	171

Overall Data (Level-I and Level-II) of 112 POs										
SL No	PO Name and	NSamFP	NSam	NSamFN	NMemM	NMemFP	Nmem	NMemFN	NBorM	NBorFP
1	Ad-din	39	0	0	0	798	0	0	0	630
2	AFAUS	736	0	0	0	14554	0	0	0	11888
3	Prodipan	484	0	0	592	15868	0	0	503	12832
4	PSKS	820	0	0	716	13798	0	0	677	13416
5	SJK	254	0	0	67	4634	0	0	59	3694
6	BASTAB	246	0	0	242	5326	0	0	215	4020
7	SACHETAN	628	0	0	0	10309	0	0	0	8719
8	GKT	843	0	0	600	16332	0	0	513	15483
9	CREED	136	0	0	174	2387	0	0	136	1708
10	AF	1755	0	0	288	24363	0	0	159	18261
11	HELP	280	0	0	21	7625	0	0	19	6151
12	MUK	875	0	0	158	17234	0	0	117	12390
13	ROVA	466	0	274	0	7069	0	3981	0	6323
14	NABOLOK	899	0	0	312	11929	0	0	254	9476
15	BSDO	169	0	0	337	3427	0	0	274	2725
16	ATMABISW	1417	0	0	1199	24375	0	0	1069	21539
17	VARD	1589	2	570	9	32757	10	12563	0	27130
18	NELS	154	0	0	0	2909	0	0	0	2731
19	SSUS	162	0	0	244	3271	0	0	232	3070
20	DDAN	113	0	0	36	1739	0	0	31	1652
21	ASUK	59	0	0	80	905	0	0	63	668
22	PDO	50	0	0	0	888	0	0	0	743
23	MBSK	933	0	0	382	17467	0	0	304	13396
24	TSSS	67	0	0	0	960	0	0	0	838
25	PMUS	714	0	0	0	16234	0	0	0	12362
26	DORP	372	0	0	223	8260	0	0	226	7489
27	SUS1	704	0	0	1735	11546	0	0	1514	8922
28	AHDO	447	0	0	476	9156	0	0	472	7229
29	ACD	326	0	0	0	6695	0	0	0	5175
30	SAPB	737	41	497	446	17362	795	9744	366	15599
31	JRDM	1182	0	0	3720	23856	0	0	3251	21657
32	ARCHES	406	0	0	1450	7621	0	0	924	7302
33	JF	2157	0	0	6431	40289	0	0	3146	34540
34	CEDAR	490	0	0	414	6531	0	0	382	5951
35	ASO	436	0	0	646	7350	0	0	501	5981
36	NEF	305	0	0	573	5205	0	0	446	4556
37	DBS	1048	0	39	19	25377	0	0	17	22904
38	GUP	795	0	0	223	15057	0	0	176	127975
39	KPUS	1048	0	39	19	25200	0	700	17	22904
40	NUSA	1158	0	0	1757	18320	0	0	1401	14782
41	JKS	658	0	0	697	14575	0	0	656	13738
42	BEDO	798	0	0	1178	14614	0	0	1101	12581
43	BERDO	65	0	89	40	956	83	1005	16	723
44	CODEC	284	135	2476	0	4508	3064	39989	0	3971
45	ALWO	142	0	0	0	2439	0	0	0	2338
46	MAMATA	50	0	0	159	1170	0	0	120	881
47	MUKTI	498	0	0	951	9382	0	0	751	8972
48	SUS2	746	0	0	0	15407	0	0	0	11283
49	SRYZONY	3150	0	0	621	42631	0	0	288	34834
50	SOJAG	1050	0	0	17904	13225	0	0	7537	7725
51	BRIDGE	207	521	8	67	5275	119	8522	47	4484
52	SPUS	280	0	0	635	5372	0	0	605	5088
53	SHATAPHO	421	0	0	0	7406	0	0	0	6687
54	SUSS	578	0	0	136	7625	0	0	106	6189
55	DAM	1535	0	0	1640	31599	0	0	1534	28445
56	EWf	943	0	0	0	15734	0	0	0	13294
57	ARAB	866	0	0	43	16953	0	0	43	13618
58	ANTAR	275	0	0	0	5162	0	0	0	4064
59	CMES	1613	0	0	11304	23164	0	0	5336	11368
60	GSS	88	0	0	0	1535	0	0	0	1243
61	AFID	130	0	0	0	2439	0	0	0	2071

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Overall Data (Level-I and Level-II) of 112 POs										
SL No	PO Name and	NSamFP	NSam	NSamFN	NMemM	NMemFP	Nmem	NMemFN	NBorM	NBorFP
62	PSFB	169	0	0	131	3059	0	0	123	1543
63	HOPE	62	0	0	61	1370	0	0	37	1193
64	GK	333	0	52	418	6831	0	816	257	5193
65	SGUS	137	0	0	0	2992	0	0	0	3025
66	POLLI SR	932	0	0	922	17160	0	0	882	15050
67	AGRAGATI	186	0	128	0	2591	0	1597	0	2223
68	SAMADHAN	385	0	0	1132	7764	0	0	627	7194
69	GE	261	0	0	250	4130	0	0	226	3606
70	UCEP	6	23	6	95	81	204	92	63	51
71	NDP	1987	0	0	269	45575	0	0	202	34942
72	FDSR	73	0	0	0	1238	0	0	0	954
73	HFSKS	541	0	0	7033	8233	0	0	5868	6712
74	SPUP	541	0	0	3042	9931	0	0	2916	9785
75	ENDEAVOU	288	0	0	474	5056	0	0	431	4713
76	VDF	285	0	0	279	5005	0	0	239	3662
77	DDJ	2085	0	0	2104	39022	0	0	1931	33855
78	CARSA	906	0	0	47	13028	0	0	46	10193
79	DISA	742	0	0	708	18541	0	0	620	15142
80	SAVIOUR	79	0	0	0	1198	0	0	0	978
81	GRAMAUS	994	0	0	1943	22147	0	0	1747	20057
82	PBK	2129	0	0	298	35996	0	0	0	29688
83	Unnayan	1016	0	0	842	15085	0	0	710	12843
84	BEES	1567	0	0	0	30208	0	0	0	27844
85	DNP	127	0	0	91	1394	0	0	91	781
86	PIPASA	0	0	0	8792	0	0	0	6831	0
87	PROGRESS	1220	0	0	0	26827	0	0	0	23322
88	ASPADA	91	0	0	0	1049	0	0	0	932
89	HUS	302	0	0	734	5985	0	0	692	5825
90	PUS	71	0	0	114	1469	548	0	114	1157
91	RESCU	104	0	0	30	2211	0	0	30	2150
92	DUS	969	0	0	2050	16660	0	0	1699	12902
93	KKS	354	0	0	160	5473	0	0	155	3726
94	PCD	1184	0	0	1516	16937	0	0	263	12389
95	NAZIR	106	0	0	62	2221	0	0	57	1790
96	LA	124	0	0	0	1561	0	0	0	1366
97	PPD	669	0	0	19	14241	0	0	18	11339
98	FS	233	0	0	116	4824	0	0	104	4110
99	GKF	75	0	0	7848	1216	0	0	7439	1096
100	ST	1302	0	0	7936	24732	0	0	5690	19493
101	AVA	266	0	0	982	4226	0	0	707	3862
102	ANUVAB	78	0	0	116	1177	0	0	114	1168
103	SANGRAM	1803	18	101	9760	31245	360	1691	9320	25749
104	UP	378	0	0	597	6939	0	0	553	5628
105	TMSS	44849	0	0	1648	686685	0	0	1469	526064
106	RRF	10903	0	0	4589	209106	0	0	3960	188356
107	SSS	16288	142	1068	12482	325841	1793	16367	9673	243219
108	Uddipan	13917	0	0	20764	228630	0	0	13876	174697
109	Swanirva	1319	0	0	584	26945	0	0	582	24541
110	JCF	17222	0	0	18914	322020	0	0	0	280193
111	ASA	49348	2589	112815	2195	1424757	146032	2995236	1581	963727
112	BRAC	53847	5178	225629	2742	2162829	292064	5990472	1692	1401390

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Overall Data (Level-I and Level-II) of 112 POs								
Sl No	PO Name and	NBorMN	NBorFNP	NStaffsM	NStaffsF	ALOSP	ALOSNP	DER
1	Ad-din	0	0	0	5	2837824	0	4.73
2	AFAUS	0	0	0	84	97932147	0	8.65
3	Prodipan	0	0	60	26	58421924	0	31.50
4	PSKS	0	0	88	0	79450495	0	11.35
5	SJK	0	0	7	24	23086089	0	-0.82
6	BASTAB	0	0	35	0	44512327	0	3.47
7	SACHETAN	0	0	62	0	45922219	0	-0.06
8	GKT	0	0	92	48	147307814	0	7.84
9	CREED	0	0	0	20	24074330	0	1.79
10	AF	0	0	0	116	99811769	0	18.86
11	HELP	0	0	38	10	71311081	0	9.50
12	MUK	0	0	45	47	91821382	0	2.02
13	ROVA	0	6323	23	30	14617523	20672299	57.57
14	NABOLOK	0	0	88	0	83694124	0	14.70
15	BSDO	0	0	20	4	34090950	0	3.90
16	ATMABISW	0	0	0	154	125932076	0	7.20
17	VARD	0	10750	206	69	141713396	51292938	7.33
18	NELS	0	0	16	2	14124460	0	6.12
19	SSUS	0	0	17	5	12602008	0	4.26
20	DDAN	0	0	10	3	61798297	0	2.80
21	ASUK	0	0	7	0	3859411	0	1.65
22	PDO	0	0	5	2	4309600	0	0.07
23	MBSK	0	0	75	34	69822139	0	1.58
24	TSSS	0	0	11	0	5541989	0	8.80
25	PMUS	0	0	79	14	71586985	0	11.55
26	DORP	0	0	49	2	55204031	0	0.10
27	SUS1	0	0	25	77	71722083	0	3.76
28	AHDO	0	0	43	6	51245681	0	8.24
29	ACD	0	0	40	0	32740228	0	10.27
30	SAPB	759	9357	131	40	115515117	60944022	7.43
31	JRDM	0	0	25	174	185338575	0	0.08
32	ARCHES	0	0	55	15	49384604	0	24.13
33	JF	0	0	281	43	271680661	0	7.43
34	CEDAR	0	0	42	8	70490487	0	3.07
35	ASO	0	0	54	6	52789495	0	13.49
36	NEF	0	0	36	5	30347187	0	11.92
37	DBS	0	0	127	0	133074533	0	3.45
38	GUP	0	0	106	0	88416198	0	3.12
39	KPUS	0	700	127	0	133074533	4182780	11.49
40	NUSA	0	0	138	0	152679010	0	9.34
41	JKS	0	0	14	102	100752384	0	8.55
42	BEDO	0	0	115	0	136296071	0	12.50
43	BERDO	34	667	20	0	5289385	3070759	3.52
44	CODEC	2691	35510	58	247	33027018	7801349	5.43
45	ALWO	0	0	16	0	12840562	0	8.42
46	MAMATA	0	0	6	0	8792941	0	7.87
47	MUKTI	0	0	13	62	81186251	0	10.71
48	SUS2	0	0	66	28	105071528	0	3.65
49	SRYZONY	0	0	209	70	174093293	0	5.58
50	SOJAG	0	0	180	0	145185673	0	7.61
51	BRIDGE	94	7043	59	16	28060378	23877277	4.37
52	SPUS	0	0	23	13	30188338	0	7.54
53	SHATAPHO	0	0	53	11	74991087	0	8.65
54	SUSS	0	0	56	0	30032932	0	9.98
55	DAM	0	0	148	21	147669528	0	4.15
56	EWF	0	0	0	72	49032795	0	0.24
57	ARAB	0	0	95	2	94704048	0	3.35
58	ANTAR	0	0	30	0	26049466	0	14.38
59	CMES	0	0	61	0	27266470	0	1.30
60	GSS	0	0	10	1	7749433	0	4.78
61	AFID	0	0	12	4	15783985	0	3.24



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Overall Data (Level-I and Level-II) of 112 POs								
SL No	PO Name and	NBorMN	NBorFNP	NStaffsM	NStaffsF	ALOSP	ALOSNP	DER
62	PSFB	0	0	18	0	15859178	0	0.51
63	HOPE	0	0	8	3	9571471	0	12.63
64	GK	0	740	126	5	26346087	0	20.00
65	SGUS	0	0	25	0	16265844	0	7.03
66	POLLI SR	0	0	65	34	81639316	0	4.07
67	AGRAGATI	0	1310	29	7	8523414	5157812	4.50
68	SAMADHAN	0	0	56	5	80614322	0	14.24
69	GE	0	0	35	0	27607151	0	11.84
70	UCEP	171	85	267	38	10877620	0	1.19
71	NDP	0	0	238	0	21602366	0	5.04
72	FDSR	0	0	0	4	4418563	0	3.81
73	HFSKS	0	0	93	0	82478652	0	9.22
74	SPUP	0	0	75	0	64684367	0	33.36
75	ENDEAVOU	0	0	28	10	28255781	0	9.39
76	VDF	0	0	30	0	33741145	0	40.01
77	DDJ	0	0	207	43	250976744	0	7.86
78	CARSA	0	0	67	15	72690623	0	5.84
79	DISA	0	0	89	13	123684384	0	11.72
80	SAVIOUR	0	0	8	2	4228980	0	23.00
81	GRAMAUS	0	0	124	0	128148033	0	0.14
82	PBK	0	0	167	27	185319390	0	0.15
83	Unnayan	0	0	63	23	74682453	0	3.58
84	BEES	0	0	169	6	136091485	0	13.04
85	DNP	0	0	18	0	2526919	0	4.34
86	PIPASA	0	0	42	15	42830406	0	14.28
87	PROGRESS	0	0	133	13	99720575	0	16.15
88	ASPADA	0	0	304	0	357096858	0	5.37
89	HUS	0	0	28	6	40786813	0	8.20
90	PUS	508	0	5	2	4516993	0	1.04
91	RESCU	0	0	11	1	6728339	0	21.37
92	DUS	0	0	130	8	83010389	0	6.33
93	KKS	0	0	46	8	24189366	0	5.37
94	PCD	0	0	0	116	85315914	0	4.10
95	NAZIR	0	0	0	116	6461220	0	3.90
96	LA	0	0	6	4	7049815	0	4.72
97	PPD	0	0	0	89	97397326	0	1.34
98	FS	0	0	0	29	25709002	0	12.61
99	GKF	0	0	56	0	76596334	0	10.03
100	ST	0	0	180	58	296773564	0	14.74
101	AVA	0	0	34	9	32495957	0	26.21
102	ANUVAB	0	0	4	1	2483664	0	1.61
103	SANGRAM	351	1607	232	55	374865667	8244665	16.18
104	UP	0	0	40	7	34084972	0	8.09
105	TMSS	0	0	1989	928	3049870000	0	3.50
106	RRF	0	0	927	238	919772374	0	13.21
107	SSS	1365	13748	2366	279	2425036441	121595867	8.70
108	Uddipan	0	0	1504	228	1534879284	0	15.25
109	Swanirva	0	0	99	15	118099744	0	7.78
110	JCF	0	0	1781	0	1647783754	0	8.07
111	ASA	143296	2682062	3274	13879	3684600673	17997624216	0.86
112	BRAC	286592	5364124	4559	26829	4319331346	35995248432	4.60

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SL No	PO Name and	Overall Data (Level-I and Level-II) of 112 PC								
		RR	IAPA	OCAPA	SR	KTA	ROA	DSCR	OSS	CPTL
1	Ad-din	0.07	0.17	0.10	0.44	0.11	0.02	1.70	1.71	0.11
2	AFAUS	0.04	0.17	0.12	0.48	0.10	0.00	1.43	1.43	0.10
3	Prodipan	0.26	0.13	0.13	0.03	0.05	-0.04	1.10	1.36	0.18
4	PSKS	-0.07	0.18	0.12	0.30	0.03	-0.03	1.24	1.04	0.10
5	SJK	0.04	0.11	0.07	0.02	0.15	0.05	1.07	2.01	0.10
6	BASTAB	0.00	0.04	0.02	0.04	0.21	0.04	3.46	1.66	0.08
7	SACHETAN	0.02	0.04	0.03	0.03	0.08	-0.14	0.95	1.23	0.22
8	GKT	0.01	0.00	0.00	0.11	0.11	-0.09	1.61	0.01	0.08
9	CREED	0.01	0.02	0.01	0.02	0.34	0.03	1.30	1.81	0.10
10	AF	0.06	0.08	0.07	0.10	0.32	-0.17	0.83	1.10	0.16
11	HELP	0.01	0.04	0.02	0.04	0.08	0.02	1.06	1.90	0.10
12	MUK	0.01	0.09	0.05	0.16	0.18	0.04	1.18	1.84	0.10
13	ROVA	0.01	0.02	0.02	0.02	0.03	-0.09	0.90	1.18	0.47
14	NABOLOK	0.03	0.08	-0.03	0.06	0.06	0.15	2.12	-2.24	0.02
15	BSDO	0.00	0.02	0.01	0.02	0.20	0.07	1.41	3.14	0.04
16	ATMABISW	0.01	0.14	0.08	0.09	0.13	0.03	1.10	1.79	0.11
17	VARD	0.01	0.17	0.13	0.17	0.07	-0.01	1.00	1.40	0.18
18	NELS	0.00	0.01	0.01	0.01	0.06	-0.01	0.96	1.32	0.12
19	SSUS	0.00	0.01	0.01	0.01	0.15	0.02	1.07	1.66	0.10
20	DDAN	0.00	0.01	0.00	0.01	0.16	-0.02	0.92	1.15	0.15
21	ASUK	0.00	0.00	0.00	0.00	0.30	-0.03	4.01	1.42	0.20
22	PDO	0.00	0.00	0.00	0.00	0.13	0.01	1.67	1.27	0.08
23	MBSK	0.01	0.07	0.04	0.07	0.36	0.05	2.45	1.87	0.07
24	TSSS	0.00	0.00	0.00	0.00	0.10	0.00	1.03	1.36	0.10
25	PMUS	0.01	0.07	0.05	0.05	0.08	0.02	1.07	1.40	0.10
26	DORP	0.01	0.04	0.02	0.04	0.40	0.04	1.14	2.05	0.09
27	SUS1	0.02	0.07	0.03	0.05	0.19	0.01	1.01	2.11	0.14
28	AHDO	0.00	0.04	0.02	0.03	0.09	0.02	1.10	1.77	0.08
29	ACD	0.01	0.03	0.02	0.03	0.08	0.01	1.03	1.54	0.10
30	SAPB	0.02	0.13	0.10	0.10	0.12	0.00	1.04	1.30	0.18
31	JRDM	0.03	0.20	0.12	0.11	0.11	0.03	0.01	1.71	0.10
32	ARCHES	0.01	0.05	-0.02	0.04	0.04	0.20	1.01	-2.74	0.00
33	JF	0.02	0.31	0.19	0.16	0.11	0.05	1.92	1.59	0.09
34	CEDAR	0.03	0.08	0.06	0.08	0.22	0.00	1.07	1.50	0.16
35	ASO	0.00	0.05	0.03	0.03	0.10	0.01	1.17	1.52	0.10
36	NEF	0.00	0.03	0.02	0.02	0.13	0.02	1.07	1.40	0.10
37	DBS	0.00	0.12	0.07	0.06	0.22	0.05	1.65	1.88	0.08
38	GUP	0.01	0.07	0.05	0.09	0.15	0.00	1.13	1.46	0.13
39	KPUS	0.01	0.04	0.03	0.04	0.12	0.02	4.65	1.46	0.11
40	NUSA	0.03	0.13	0.07	0.11	0.09	0.03	0.97	1.84	0.10
41	JKS	0.00	0.08	0.05	0.06	0.10	0.03	2.04	1.67	0.09
42	BEDO	0.01	0.13	0.08	0.09	0.07	0.01	1.05	1.53	0.11
43	BERDO	0.00	0.01	0.01	0.01	0.35	-0.01	0.80	1.08	0.19
44	CODEC	0.02	0.03	0.05	0.03	0.28	-0.17	2.90	0.62	0.30
45	ALWO	0.02	0.01	0.01	0.01	0.09	-0.52	1.31	1.05	0.75
46	MAMATA	0.00	0.08	0.00	0.00	0.20	1.82	67.43	23.97	0.05
47	MUKTI	0.01	0.70	0.04	0.08	0.08	1.59	1.01	16.73	0.10
48	SUS2	0.01	0.10	0.07	0.12	0.21	0.01	1.84	1.30	0.12
49	SRYZONY	0.08	0.16	0.13	0.14	0.15	-0.01	0.67	1.26	0.14
50	SOJAG	0.01	0.19	0.09	0.13	1.12	0.03	1.02	2.11	0.07
51	BRIDGE	0.01	0.04	0.03	0.05	0.23	0.01	1.12	1.30	0.22
52	SPUS	0.02	0.02	0.01	0.02	-0.08	-0.08	0.83	1.81	0.18
53	SHATAPHO	0.00	0.04	0.02	0.03	0.10	0.05	1.10	1.94	0.09
54	SUSS	0.02	0.03	0.03	0.02	0.24	-0.05	1.21	1.05	0.20
55	DAM	0.06	0.13	0.16	0.14	0.30	-0.06	0.33	0.82	0.16
56	EWf	0.03	0.03	0.03	0.13	0.02	-0.02	4.73	1.03	0.15
57	ARAB	0.02	0.10	0.05	0.08	0.22	0.03	3.71	2.04	0.14
58	ANTAR	0.00	0.03	0.02	0.02	0.06	0.02	1.03	1.58	0.05
59	CMES	0.02	0.07	0.03	0.08	0.41	0.06	1.70	2.26	0.08
60	GSS	0.00	0.01	0.00	0.01	0.16	0.01	1.10	1.64	0.09
61	AFID	0.00	0.02	0.01	0.01	0.23	0.06	1.36	2.41	0.09

## Dhaka University Institutional Repository

SL No	PO Name and	Overall Data (Level-I and Level-II) of 112 PC								
		RR	IAPA	OCAPA	SR	KTA	ROA	DSCR	OSS	CPTL
62	PSFB	0.00	0.18	0.03	0.01	0.59	0.62	8.30	6.13	0.24
63	HOPE	0.00	0.00	0.00	0.01	0.07	-0.12	1.06	0.15	0.08
64	GK	0.00	0.00	0.01	0.02	0.04	-0.12	0.96	-0.15	1.74
65	SGUS	0.00	0.01	0.01	0.00	0.10	0.04	2.95	1.80	0.08
66	POLLI SR	0.02	0.07	0.05	0.06	0.18	-0.01	3.62	1.45	0.12
67	AGRAGATI	0.00	0.01	0.01	0.01	0.17	-0.04	0.80	1.09	0.19
68	SAMADHAN	0.01	0.06	0.03	0.04	0.06	0.03	1.13	2.08	0.08
69	GE	0.00	0.02	0.01	0.02	0.08	0.04	1.21	1.79	0.08
70	UCEP	0.00	0.01	0.00	0.00	0.23	0.08	24.41	43.54	0.05
71	NDP	0.02	0.21	0.12	0.16	0.16	0.03	5.37	1.67	0.14
72	FDSR	0.00	0.00	0.00	0.00	0.18	0.02	5.82	1.37	0.12
73	HFSKS	0.02	0.06	0.06	0.07	0.03	-0.02	0.66	0.97	0.14
74	SPUP	0.02	0.03	0.03	0.05	0.03	-0.02	0.96	1.04	0.28
75	ENDEAVOU	0.00	0.02	0.02	0.02	0.15	0.00	0.99	1.52	0.12
76	VDF	0.00	0.02	0.01	0.03	0.04	0.00	1.01	1.32	0.09
77	DDJ	0.02	0.20	0.16	0.00	0.11	0.02	1.08	1.24	0.10
78	CARSA	0.01	0.06	0.04	0.00	0.14	0.00	2.21	1.55	0.14
79	DISA	0.00	0.11	0.06	0.11	0.08	0.04	1.07	1.72	0.07
80	SAVIOUR	0.00	0.00	0.00	0.00	0.04	-0.06	0.95	0.98	0.17
81	GRAMAUS	0.01	0.11	0.08	0.10	0.06	0.02	0.86	1.47	0.10
82	PBK	0.06	0.15	0.11	0.18	0.05	0.00	0.87	1.33	0.12
83	Unnayan	0.13	0.20	0.09	0.34	0.21	0.03	1.08	2.29	0.12
84	BEES	0.02	0.17	0.18	0.26	0.09	-0.04	0.87	0.96	0.16
85	DNP	0.00	0.00	0.01	0.00	0.09	-0.09	0.94	0.78	0.36
86	PIPASA	0.01	0.04	-0.01	0.03	0.09	-0.01	2.80	-5.82	10.87
87	PROGRESS	0.02	0.09	0.07	0.08	0.06	-0.01	0.98	1.34	0.11
88	ASPADA	0.01	0.35	0.22	0.00	0.15	0.04	1.14	1.62	0.09
89	HUS	0.00	0.04	0.02	0.04	0.11	0.05	1.18	2.19	0.21
90	PUS	0.00	0.00	0.00	0.01	0.36	-0.01	1.57	0.84	0.58
91	RESCU	0.00	0.01	0.01	0.01	0.04	-0.02	0.95	1.32	0.16
92	DUS	0.02	0.10	0.07	0.07	0.13	0.03	1.09	1.42	0.14
93	KKS	0.01	0.03	0.02	0.02	0.41	-0.06	0.40	1.36	0.18
94	PCD	0.03	0.08	0.13	0.05	0.18	-0.18	0.98	0.60	0.26
95	NAZIR	0.00	0.01	0.01	0.01	1.27	-0.15	1.38	0.93	0.17
96	LA	0.00	0.00	0.00	0.00	0.16	0.01	1.10	1.38	0.09
97	PPD	0.01	0.11	0.05	0.03	0.41	0.09	1.38	2.24	0.08
98	FS	0.00	0.02	0.01	0.02	0.07	0.03	1.08	1.55	0.09
99	GKF	0.00	0.06	0.02	0.11	0.08	0.04	1.17	2.54	0.07
100	ST	0.03	0.18	0.13	0.10	0.06	0.01	1.04	1.41	0.10
101	AVA	0.00	0.02	0.02	0.02	0.04	0.01	1.05	1.32	0.09
102	ANUVAB	0.01	0.00	0.00	0.00	-0.63	-0.63	0.38	1.57	1.55
103	SANGRAM	0.06	0.25	0.12	0.20	0.06	0.02	1.08	2.11	0.10
104	UP	0.15	0.18	0.10	0.31	0.10	-0.03	0.91	1.77	0.15
105	TMSS	0.05	0.21	0.16	0.39	0.21	0.01	1.03	1.33	0.11
106	RRF	0.06	0.19	0.15	0.26	0.11	-0.01	0.94	1.24	0.14
107	SSS	0.05	0.21	0.13	0.38	0.09	0.02	1.10	1.57	0.10
108	Uddipan	0.03	0.19	0.14	0.41	0.09	0.00	1.02	1.36	0.10
109	Swanirva	0.13	0.13	0.09	0.22	0.10	0.01	1.30	1.43	0.13
110	JCF	0.12	0.18	0.10	0.34	0.10	0.02	1.05	1.82	0.12
111	ASA	0.04	0.19	0.11	0.01	0.54	0.07	3.92	1.83	0.07
112	BRAC	0.01	0.21	0.16	0.42	0.18	0.01	3.92	1.28	0.12

Sl No	PO Name and	ps											Ove
		PAR	KTAW	ROE	CR	ODR	DR	POCA	LLPR	ODR	NOM	FCAPA	LLAPA
1	Ad-din	1.08	0.16	0.21	1.54	0.97	0.06	0.01	0.06	0.97	0.03	0.03	0.01
2	AFAUS	1.10	0.12	0.03	1.79	0.99	0.02	0.02	0.03	0.99	0.00	0.03	0.02
3	Prodipan	1.00	0.04	0.69	1.90	0.48	0.25	0.02	0.26	0.48	-0.04	0.03	0.02
4	PSKS	0.00	9.74	9.09	2.52	0.80	0.29	0.01	0.30	0.80	0.02	0.03	0.01
5	SJK	1.15	0.00	0.02	1.98	0.98	0.03	0.00	0.04	0.98	0.02	0.02	0.00
6	BASTAB	0.00	0.23	0.19	1.33	0.99	0.00	0.00	0.00	0.99	0.01	0.01	0.00
7	SACHETAN	0.02	-0.08	1.69	1.38	0.90	0.02	0.03	0.02	0.90	-0.03	0.01	0.03
8	GKT	0.01	0.16	0.42	1.31	0.99	0.01	0.01	0.01	0.99	-0.09	0.08	0.01
9	CREED	0.01	0.34	0.11	2.59	0.95	0.01	0.00	0.01	0.95	0.00	0.00	0.00
10	AF	0.08	-0.05	-0.01	2.15	0.84	0.07	0.02	0.06	0.84	-0.02	0.01	0.02
11	HELP	0.01	0.08	0.21	1.84	0.97	0.01	0.00	0.01	0.97	0.01	0.01	0.00
12	MUK	0.01	0.25	0.25	1.38	0.99	0.00	0.00	0.71	0.99	0.02	0.02	0.00
13	ROVA	0.07	0.02	-0.94	2.11	0.87	0.01	0.02	0.01	0.87	-0.02	0.00	0.02
14	NABOLOK	0.03	0.07	0.38	1.33	0.92	0.03	0.03	0.03	0.92	0.07	0.02	0.03
15	BSDO	0.00	0.24	0.41	2.22	0.99	0.00	0.00	0.00	0.99	0.01	0.00	0.00
16	ATMABISW	0.02	0.14	0.36	1.48	0.98	0.02	0.01	0.01	0.98	0.02	0.03	0.01
17	VARD	0.24	0.13	0.00	1.29	0.85	0.11	0.02	0.07	0.85	-0.01	0.04	0.02
18	NELS	0.00	0.07	-0.18	1.61	0.95	0.00	0.00	0.00	0.95	0.00	0.00	0.00
19	SSUS	0.01	0.19	0.11	1.79	0.97	0.00	0.00	0.00	0.97	0.00	0.00	0.00
20	DDAN	0.00	0.20	-0.10		0.87	0.00	0.00	0.00	0.87	0.00	0.00	0.00
21	ASUK	0.00	0.34	-0.08	1.34	0.87	0.00	0.00	0.00	0.87	0.00	0.00	0.00
22	PDO	0.00	0.14	0.09	1.89	0.99	0.00	0.00	0.00	0.99	0.00	0.00	0.00
23	MBSK	0.01	0.50	0.17	2.28	0.97	0.01	0.00	0.01	0.97	0.02	0.01	0.00
24	TSSS	0.00	0.11	0.05	1.80	0.93	0.00	0.00	0.00	0.93	0.00	0.00	0.00
25	PMUS	0.19	0.10	0.29	1.60	0.98	0.01	0.00	0.01	0.98	0.01	0.01	0.00
26	DORP	0.02	0.00	0.55	1.75	0.93	0.02	0.00	0.01	0.93	0.01	0.01	0.00
27	SUS1	0.02	0.23	0.04	1.70	0.94	0.02	0.01	0.02	0.94	0.00	0.02	0.01
28	AHD@	0.01	0.11	0.26	1.69	0.97	0.01	0.00	0.00	0.97	0.01	0.01	0.00
29	ACD	0.01	0.10	0.07	1.88	0.95	0.01	0.00	0.01	0.95	0.00	0.01	0.00
30	SAPB	0.18	0.14	0.12	2.10	0.95	0.02	0.03	0.02	0.95	0.00	0.00	0.03
31	JRDM	0.04	0.13	0.31	2.34	0.97	0.04	0.02	0.03	0.97	0.03	0.04	0.02
32	ARCHES	0.01	0.04	0.29	0.93	1.05	0.01	0.01	0.01	1.05	0.05	0.01	0.01
33	JF	0.02	0.16	0.52	1.70	1.00	0.00	0.00	0.02	1.00	0.08	0.03	0.00
34	CEDAR	0.03	0.21	0.05	2.90	0.93	0.03	0.01	0.03	0.93	0.00	0.01	0.01
35	ASO	0.01	0.09	0.20	1.47	0.99	0.00	0.00	0.00	0.99	0.00	0.01	0.00
36	NEF	0.00	0.11	0.32	1.42	0.98	0.00	0.00	0.00	0.98	0.00	0.00	0.00
37	DBS	0.00	0.22	0.24	1.26	1.00	0.00	0.00	0.00	1.00	0.04	0.02	0.00
38	GUP	0.07	0.17	0.24	5.98	0.89	0.05	0.01	0.03	0.89	0.00	0.01	0.01
39	KPUS	0.01	0.10	0.48	1.40	0.98	0.00	0.00	0.01	0.98	0.00	0.01	0.00
40	NUSA	0.39	0.11	0.36	1.62	0.96	0.03	0.01	0.03	0.96	0.03	0.02	0.01
41	JKS	0.01	0.13	0.36	0.99	1.00	0.00	0.00	0.00	1.00	0.02	0.01	0.00
42	BEDO	0.02	0.08	0.18	1.80	0.98	0.01	0.01	0.01	0.98	0.01	0.02	0.01
43	BERDO	0.01	0.26	0.00	1.86	0.98	0.00	0.00	0.00	0.98	0.00	0.00	0.00
44	CODEC	0.10	0.21	0.00	0.54	0.89	0.02	0.02	0.02	0.89	-0.03	0.00	0.02
45	ALWO	0.02	0.11	-0.34	1.11	0.60	0.02	0.03	0.02	0.60	-0.03	0.00	0.03
46	MAMATA	0.00	0.10	0.62	2.00	1.00	0.00	0.00	0.00	1.00	0.07	0.00	0.00
47	MUKTI	0.06	0.09	0.35	1.41	0.98	0.01	0.00	0.01	0.98	0.64	0.02	0.00
48	SUS2	0.01	0.24	0.07	1.71	0.88	0.06	0.00	0.01	0.88	0.01	0.01	0.00
49	SRYZONY	-3.35	0.18	-0.05	1.17	1.08	0.06	0.02	0.07	1.08	-0.01	0.02	0.02
50	SOJAG	0.01	0.15	-0.32	0.51	1.00	0.01	0.01	0.01	1.00	0.03	0.06	0.01
51	BRIDGE	0.10	0.20	0.08	1.91	0.92	0.01	0.00	0.01	0.92	0.00	0.00	0.00
52	SPUS	0.07	0.06	1.65	3.63	0.74	0.04	0.01	0.03	0.74	-0.01	0.01	0.01
53	SHATAPHO	0.00	0.08	0.69	1.93	1.00	0.00	0.00	0.00	1.00	0.01	0.01	0.00
54	SUSS	0.06	0.09	0.01	2.08	0.88	0.02	0.01	0.02	0.88	-0.01	0.00	0.01
55	DAM	0.08	0.18	-0.56	1.79	0.89	0.08	0.00	0.06	0.89	-0.04	0.01	0.00
56	EWf	0.04	0.22	0.09	0.85	0.79	0.03	0.00	0.03	0.79	0.00	0.01	0.00
57	ARAB	0.03	0.37	0.14	2.36	0.92	0.03	0.01	0.02	0.92	0.02	0.02	0.01
58	ANTAR	0.00	0.07	0.28	1.46	0.99	0.00	0.00	0.00	0.99	0.00	0.00	0.00
59	CMES	0.04	0.48	0.15	2.25	0.94	0.02	0.01	0.02	0.94	0.02	0.01	0.01
60	GSS	0.02	0.21	0.07	2.95	0.91	0.00	0.00	0.00	0.91	0.00	0.00	0.00
61	AFID	0.00	0.29	0.32	1.77	0.99	0.00	0.00	0.00	0.99	0.01	0.00	0.00

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Sl No	PO Name and	ps			Ove								
		PAR	KTAW	ROE	CR	ODR	DR	POCA	LLPR	ODR	NOM	FCAPA	LLAPA
62	PSFB	0.00	0.59	1.99	0.25	1.00	0.00	0.00	0.00	1.00	0.15	0.00	0.00
63	HOPE	0.00	0.07	0.16	1.42	0.97	0.00	0.00	0.00	0.97	-0.01	0.00	0.00
64	GK	0.07	0.08	-0.42	1.57	0.47	0.01	0.01	0.01	0.47	-0.02	0.00	0.01
65	SGUS	0.00	0.13	0.51	1.75	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
66	POLLI SR	0.03	0.25	-0.03	2.03	0.95	0.02	0.01	0.02	0.95	0.00	0.01	0.01
67	AGRAGATI	0.00	0.23	-0.20	1.61	0.89	0.00	0.00	0.00	0.89	0.00	0.00	0.00
68	SAMADHAN	0.01	0.08	0.73	2.84	0.97	0.01	0.00	0.01	0.97	0.01	0.01	0.00
69	GE	0.00	0.09	1.18	1.67	0.98	0.00	0.00	0.00	0.98	0.01	0.00	0.00
70	UCEP	0.01	0.26	0.45	5.33	0.08	0.03	0.00	0.00	0.08	0.00	0.00	0.00
71	NDP	0.01	0.20	0.23	1.75	1.01	0.01	0.01	0.01	1.01	0.04	0.03	0.01
72	FDSR	0.00	0.21	0.11	1.58	1.05	0.00	0.00	0.00	1.05	0.00	0.00	0.00
73	HFSKS	0.02	0.04	-0.54	2.47	0.95	0.02	0.01	0.07	0.95	-0.01	0.00	0.01
74	SPUP	0.12	0.03	-0.06	1.33	0.47	0.17	0.00	0.07	0.47	-0.01	0.01	0.00
75	ENDEAVOU	0.00	0.13	-0.03	1.68	0.96	0.00	0.00	0.00	0.96	0.00	0.00	0.00
76	VDF	0.03	0.05	0.13	2.50	0.96	0.00	0.00	0.00	0.96	0.00	0.00	0.00
77	DDJ	0.04	0.15	0.19	2.53	0.97	0.03	0.01	0.02	0.97	0.03	0.00	0.01
78	CARSA	0.03	0.17	0.00	5.44	0.00	0.03	0.01	0.01	0.00	0.00	0.01	0.01
79	DISA	0.01	0.08	0.72	1.36	1.00	0.00	0.00	0.00	1.00	0.03	0.02	0.00
80	SAVIOUR	0.00	0.04	-0.87	1.18	0.98	0.00	0.00	0.00	0.98	0.00	0.00	0.00
81	GRAMAUS	0.01	0.06	0.50	1.39	0.97	0.01	0.00	0.01	0.97	0.02	0.01	0.00
82	PBK	0.03	0.06	-0.51	1.44	0.91	0.07	0.04	0.08	0.91	0.00	0.00	0.04
83	Unnayan	0.85	0.25	0.18	1.73	0.94	0.11	0.04	0.13	0.94	0.03	0.03	0.04
84	BEES	1.05	0.08	-0.44	1.58	0.92	0.15	0.01	0.15	0.92	-0.04	0.03	0.01
85	DNP	0.00	0.15	-0.66	0.73	0.87	0.00	0.00	0.00	0.87	0.00	0.00	0.00
86	PIPASA	0.02	0.05	-0.13	3.52	0.16	0.01	0.00	0.01	0.16	0.00	0.04	0.00
87	PROGRESS	0.04	0.06	-0.15	1.44	0.92	0.04	0.01	0.03	0.92	0.00	0.02	0.01
88	ASPADA	0.00	0.17	0.30	1.60	1.00	0.00	0.00	0.01	1.00	0.08	0.06	0.00
89	HUS	0.00	0.12	0.57	3.05	0.87	0.01	0.00	0.00	0.87	0.01	0.01	0.00
90	PUS	0.04	-0.39		1.23	0.77	0.00	0.00	0.00	0.77	0.00	0.00	0.00
91	RESCU	0.00	0.05	0.46	2.40	0.91	0.00	0.00	0.00	0.91	0.00	0.00	0.00
92	DUS	0.02	0.16	0.04	1.49	0.97	0.01	0.00	0.02	0.97	0.02	0.01	0.00
93	KKS	0.02	0.15	0.33	1.00	0.88	0.02	0.00	0.01	0.88	0.00	0.01	0.00
94	PCD	0.03	0.22	-1.06	1.90	0.93	0.03	0.02	0.03	0.93	-0.09	0.01	0.02
95	NAZIR	0.00	0.21	0.07	2.18	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
96	LA	0.00	0.22	0.09	0.67	0.83	0.00	0.00	0.00	0.83	0.00	0.00	0.00
97	PPD	0.00	0.49	0.23	2.18	0.99	0.00	0.00	0.01	0.99	0.04	0.02	0.00
98	FS	0.00	0.09	0.45	1.65	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
99	GKF	0.01	9.17	0.62	1.13	0.97	0.01	0.00	0.01	0.97	0.02	0.02	0.00
100	ST	0.19	0.07	0.25	2.22	0.83	0.19	0.00	0.07	0.83	0.02	0.03	0.00
101	AVA	0.00	0.05	0.38	1.36	0.98	0.00	0.00	0.00	0.98	0.00	0.00	0.00
102	ANUVAB	0.01	-0.66	-2.00	0.29	0.49	0.01	0.01	0.01	0.49	-0.01	0.00	0.01
103	SANGRAM	0.18	0.06	0.47	1.66	0.88	0.18	0.06	0.06	0.88	0.04	0.03	0.06
104	UP	0.00	0.12	-0.28	1.63	0.93	0.12	0.07	0.14	0.93	-0.03	0.03	0.07
105	TMSS	0.04	0.23	0.04	1.59	0.90	0.03	0.01	0.04	0.90	0.01	0.03	0.01
106	RRF	0.28	0.08	-0.25	1.87	0.93	0.15	0.03	0.06	0.93	-0.02	0.02	0.03
107	SSS	0.06	0.13	0.29	2.10	0.98	0.04	0.01	0.05	0.98	0.03	0.04	0.01
108	Uddipan	0.05	0.07	0.06	1.73	0.98	0.03	0.01	0.03	0.98	0.00	0.03	0.01
109	Swanirva	0.31	0.12	0.11	2.29	0.87	0.16	0.00	0.11	0.87	0.01	0.03	0.00
110	JCF	0.13	0.14	0.20	1.59	0.93	0.13	0.02	0.12	0.93	0.02	0.04	0.02
111	ASA	1.10	0.55	0.13	1.49	0.99	0.01	0.01	0.04	0.99	0.07	0.00	0.01
112	BRAC	0.14	0.18	0.04	1.49	0.99	0.02	0.03	0.01	0.99	0.01	0.01	0.03

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		All Data (Level-I and Level-II) of 112 POs											
SL No	PO Name and	CRR	LSR	OTR	FSS	CA	AQ	Mgt	Earnings	Liquidity	GG1	GG2	
1	Ad-din	0.99	0.51	1.00	1.13	3.58	1.25	0.17	0.42	0.12	3	3	
2	AFAUS	1.00	0.28	0.98	0.98	6.39	1.25	0.17	0.54	0.11	3	3	
3	Prodipan	0.95	0.41	0.78	0.78	24.92	0.54	0.05	0.65	0.01	2	3	
4	PSKS	0.99	0.26	0.99	1.08	9.12	0.97	0.28	8.52	3.18	3	3	
5	SJK	0.92	0.30	0.79	1.19	-0.43	1.22	0.03	0.02	0.09	2	3	
6	BASTAB	1.00	0.10	1.00	1.20	2.94	1.24	0.04	0.18	0.12	3	3	
7	SACHETAN	0.97	0.10	0.88	0.59	0.17	1.12	0.03	1.58	0.47	3	4	
8	GKT	1.00	0.02	0.99	0.00	6.37	1.24	0.09	0.39	-0.06	4	3	
9	CREED	0.99	0.19	0.99	1.09	1.62	1.19	0.02	0.10	0.16	4	4	
10	AF	1.00	0.51	0.97	0.74	15.01	1.04	0.10	-0.02	-0.04	4	4	
11	HELP	0.78	0.40	0.97	1.12	7.67	1.21	0.03	0.19	0.05	3	4	
12	MUK	1.00	0.57	0.97	1.18	1.80	1.20	0.14	0.24	0.09	3	4	
13	ROVA	0.98	0.30	0.98	0.59	45.37	1.09	0.02	-0.89	0.29	4	4	
14	NABOLOK	0.98	0.35	0.82	7.46	11.75	1.15	0.05	0.36	0.10	4	4	
15	BSDO	1.00	0.28	0.99	1.72	3.27	1.24	0.02	0.39	0.13	2	2	
16	ATMABISW	0.99	0.36	0.99	1.16	5.86	1.22	0.09	0.34	0.09	3	3	
17	VARD	0.89	0.27	0.88	0.93	5.97	1.05	0.16	0.00	-7.97	3	3	
18	NELS	0.99	0.26	0.98	0.91	5.02	1.19	0.01	-0.17	0.05	2	3	
19	SSUS	0.99	0.28	0.98	1.06	3.56	1.21	0.01	0.11	0.08	3	3	
20	DDAN	0.98	0.00	0.96	0.86	2.41	1.09	0.01	-0.09	0.07	3	3	
21	ASUK	0.98	0.65	0.91	0.78	1.51	1.09	0.00	-0.07	0.15	2	2	
22	PDO	1.00	0.43	0.88	1.03	0.27	1.25	0.00	0.08	0.09	4	4	
23	MBSK	0.99	1.08	1.10	1.30	1.45	1.21	0.07	0.16	0.18	3	3	
24	TSSS	1.00	0.35	1.08	1.00	7.12	1.16	0.00	0.04	0.05	2	2	
25	PMUS	0.99	0.98	0.97	1.09	9.28	1.22	0.05	0.27	0.09	4	4	
26	DORP	0.99	0.36	0.94	1.13	0.29	1.16	0.04	0.52	0.06	3	3	
27	SUS1	0.99	0.39	0.98	0.98	3.16	1.17	0.05	0.04	-5.15	3	3	
28	AHDO	0.99	0.28	0.99	1.12	6.68	1.21	0.03	0.24	0.07	2	2	
29	ACD	0.99	0.27	0.98	1.01	8.27	1.19	0.02	0.06	0.05	3	3	
30	SAPB	0.99	0.35	0.97	0.96	6.04	1.18	0.10	0.11	0.65	3	3	
31	JRDM	0.99	0.72	0.98	1.13	0.28	1.20	0.11	0.30	0.11	3	3	
32	ARCHES	0.99	0.15	0.95	100.10	19.14	1.31	0.03	0.28	0.06	2	2	
33	JF	1.00	0.56	0.98	1.31	6.04	1.25	0.16	0.49	0.10	4	4	
34	CEDAR	1.00	1.22	0.93	0.94	2.62	1.15	0.08	0.05	0.13	2	3	
35	ASO	0.99	0.27	0.98	1.05	10.80	1.24	0.03	0.19	0.14	2	2	
36	NEF		0.23	0.99	1.10	9.57	1.22	0.02	0.30	0.07	2	3	
37	DBS	1.00	0.61	1.00	1.29	2.92	1.25	0.06	0.23	0.12	2	2	
38	GUP	0.98	0.23	0.96	0.93	2.66	1.11	0.09	0.22	0.10	3	3	
39	KPUS	0.99	1.12	1.00	1.07	9.23	1.22	0.04	0.45	0.07	4	4	
40	NUSA	0.99	0.51	0.97	1.22	7.54	1.20	0.10	0.34	0.07	2	2	
41	JKS	1.00	0.33	1.00	1.20	6.92	1.25	0.06	0.34	0.08	3	2	
42	BEDO	0.99	0.28	0.98	1.05	10.02	1.23	0.09	0.17	0.20	4	2	
43	BERDO	1.00	0.34	0.99	0.80	2.98	1.22	0.01	0.00	0.10	3	3	
44	CODEC	0.98	0.21	0.99	0.43	4.47	1.12	0.03	-0.01	0.14	2	2	
45	ALWO	0.87	0.01	0.94	0.17	6.82	0.75	0.01	-0.35	0.08	3	3	
46	MAMATA	1.00	0.10	1.00	16.91	6.39	1.25	0.00	0.71	19.26	4	4	
47	MUKTI	0.99	0.34	0.98	11.27	8.62	1.23	0.07	0.44	6.33	3	3	
48	SUS2	1.00	0.19	1.00	1.02	3.08	1.09	0.11	0.07	0.10	3	3	
49	SRZYONY	0.99	0.34	0.98	0.92	4.59	1.34	0.14	-0.05	0.13	3	3	
50	SOJAG	1.00	0.26	0.99	0.87	6.18	1.25	0.12	-0.30	0.08	5	4	
51	BRIDGE	0.99	0.21	0.99	0.96	3.64	1.15	0.05	0.07	0.37	3	3	
52	SPUS	0.94	0.19	0.99	0.66	6.13	0.92	0.02	1.55	0.11	2	1	
53	SHATAPHO	1.00	0.29	1.00	1.32	7.00	1.26	0.03	0.65	0.08	3	2	
54	SUSS	0.98	0.26	0.90	0.73	8.04	1.10	0.02	0.00	0.09	4	4	
55	DAM	0.98	0.06	0.90	0.69	3.47	1.10	0.14	-0.53	0.11	4	4	
56	EWf	0.97	0.17	0.91	0.86	0.40	0.98	0.11	0.09	0.22	3	3	
57	ARAB	0.99	0.83	0.96	1.15	2.84	1.15	0.07	0.14	0.15	3	4	
58	ANTAR	0.99	0.23	0.98	1.06	11.50	1.24	0.02	0.27	0.09	3	3	
59	CMES	0.99	0.51	0.94	1.27	1.24	1.17	0.07	0.15	0.20	3	3	
60	GSS	0.99	0.32	0.98	1.02	3.97	1.14	0.01	0.06	0.09	3	3	
61	AFID	1.00	0.25	1.00	1.44	2.76	1.24	0.01	0.31	0.16	2	2	

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Full Data (Level-I and Level-II) of 112 POs												
SL No	PO Name and	CRR	LSR	OTR	FSS	CA	AQ	Mgt	Earnings	Liquidity	GG1	GG2
62	PSFB	1.00	0.27	1.00	4.56	0.62	1.25	0.01	1.90	15.81	3	4
63	HOPE	0.92	0.16	0.98	0.07	10.12	1.21	0.01	0.14	-0.66	3	3
64	GK	1.00	0.12	1.00	-0.08	15.90	0.59	0.02	-0.41	-0.18	3	3
65	SGUS	1.00	1.05	1.00	1.31	5.73	1.25	0.00	0.48	0.09	1	1
66	POLLI SR	0.99	0.43	0.96	0.90	3.41	1.18	0.06	-0.03	0.13	4	4
67	AGRAGATI	0.99	0.26	0.94	0.74	3.75	1.11	0.01	-0.19	0.14	3	3
68	SAMADHAN	0.99	0.44	0.98	1.31	11.39	1.21	0.04	0.69	0.06	3	3
69	GE	0.99	0.24	0.99	1.30	9.50	1.23	0.02	1.11	0.11	2	2
70	UCEP	0.97	0.24	0.92	2.44	1.15	0.09	0.00	0.43	0.10	3	3
71	NDP	1.00	0.30	0.99	1.17	4.17	1.27	0.16	0.22	0.14	3	3
72	FDSR	0.99	0.24	1.00	1.05	3.20	1.31	0.00	0.11	0.12	3	1
73	HFSKS	0.79	1.16	0.96	0.83	7.45	1.19	0.07	-0.51	-0.01	3	3
74	SPUP	0.91	0.70	0.87	0.79	26.38	0.57	0.04	-0.06	0.05	5	3
75	ENDEAVOU	0.98	0.24	0.97	0.96	7.58	1.21	0.02	-0.02	0.00	2	2
76	VDF	1.00	0.27	0.97	1.01	31.60	1.20	0.02	0.12	0.03	2	2
77	DDJ	0.99	0.26	0.98	1.12	6.38	1.21	0.02	0.18	0.08	3	3
78	CARSA	0.99	0.27	0.96	0.96	4.80	0.00	0.01	0.00	0.09	4	3
79	DISA	1.00	0.34	1.00	1.30	9.41	1.25	0.11	0.68	0.06	3	2
80	SAVIOUR	1.00	0.25	1.00	0.75	18.26	1.23	0.00	-0.82	0.06	4	2
81	GRAMAUS	1.00	0.27	0.96	1.15	0.33	1.22	0.09	0.47	0.07	3	3
82	PBK	0.96	0.27	0.97	0.98	3.58	1.25	0.00	0.09	0.91	2	2
83	Unnayan	0.99	0.92	0.96	1.12	2.28	0.79	0.07	0.22	0.19	4	4
84	BEES	0.99	0.22	0.96	0.78	5.13	1.25	0.10	0.41	0.11	2	2
85	DNP	0.99	0.42	0.78	0.71	3.62	1.08	0.00	-0.63	0.05	3	4
86	PIPASA	0.89	0.16	0.94	0.93	11.42	0.19	0.03	-0.12	0.06	4	3
87	PROGRESS	0.98	0.36	0.95	0.94	12.88	1.15	0.08	-0.14	0.10	4	5
88	ASPADA	1.00	0.24	1.00	1.20	4.43	1.25	0.03	0.28	0.11	4	5
89	HUS	0.97	0.26	0.97	1.30	6.65	1.09	0.03	0.54	0.07	4	5
90	PUS	0.96		0.93	0.53	1.03	0.97	0.01	0.00	-0.04	2	2
91	RESCU	0.99	0.57	0.99	0.89	16.98	1.14	0.01	0.43	0.04	4	5
92	DUS	0.99	0.29	0.96	1.14	5.18	1.21	0.07	0.04	0.18	5	5
93	KKS	0.99	0.48	0.93	0.85	4.43	1.10	0.02	0.30	0.02	3	4
94	PCD	1.00	0.26	0.93	0.46	3.43	1.16	0.06	-1.01	0.12	3	3
95	NAZIR	1.00	0.10	1.00	0.85	3.27	1.25	0.01	0.06	0.06	4	4
96	LA	0.99	0.30	1.00	1.04	3.92	1.04	0.00	0.08	0.12	3	3
97	PPD	1.00	0.29	1.00	1.39	1.27	1.24	0.03	0.22	0.22	2	2
98	FS	1.00	0.29	1.00	1.16	10.11	1.25	0.02	0.43	0.06	3	4
99	GKF	0.98	0.07	0.97	1.34	8.08	1.21	0.09	0.58	2.93	3	3
100	ST	0.98	0.24	0.93	1.09	11.78	1.02	0.11	0.24	0.05	4	3
101	AVA	0.99	0.25	0.98	1.07	20.77	1.23	0.02	0.36	0.44	3	2
102	ANUVAB	0.94	0.05	0.86	0.11	1.48	0.61	0.00	-1.92	-0.20	3	1
103	SANGRAM	0.98	0.25	0.88	1.16	12.91	1.07	0.18	0.44	0.07	4	5
104	UP	0.98	0.58	0.93	0.82	3.46	1.19	0.14	-0.26	0.10	4	3
105	TMSS	1.00	0.30	0.99	1.00	2.96	1.12	0.36	0.04	0.11	4	4
106	RRF	0.99	0.24	0.93	0.89	10.58	1.14	0.24	-0.23	0.08	3	4
107	SSS	0.99	0.25	0.99	1.12	7.04	1.22	0.34	0.28	0.12	4	5
108	Uddipan	0.99	0.14	0.98	0.99	12.18	1.22	0.37	0.05	0.07	4	4
109	Swanirva	0.98	0.18	0.97	1.04	6.32	1.05	0.21	0.10	0.17	4	5
110	JCF	0.98	0.25	0.99	1.08	6.55	1.14	0.30	0.19	0.10	3	2
111	ASA	0.99	0.22	1.00	1.27	0.60	0.53	0.49	0.70	1.67	5	4
112	BRAC	0.99	0.22	1.00	0.98	0.92	0.53	0.46	0.31	0.60	5	5

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		Overall Data (Level-I and Level-II) of 112 POs														
Sl No	PO Name and	GG3	GG4	GG5	GG6	EX1	EX2	EX3	SR1	SR2	SR3	PR1	PR2	CGG	CEx	CSR
1	Ad-din	3	3	3	3	2	3	4	3	3	2	1	1	3.00	2.47	2.49
2	AFAUS	3	3	3	3	2	3	3	4	3	1	2	2	3.00	2.32	2.36
3	Prodipan	3	2	2	3	2	2	2	2	2	2	2	1	2.45	2.00	2.00
4	PSKS	3	3	2	1	2	2	2	3	2	2	2	2	2.28	2.00	2.20
5	SJK	3	2	2	3	1	3	3	2	2	2	2	1	2.47	1.69	2.00
6	BASTAB	3	3	3	3	1	4	4	2	3	3	1	1	3.00	1.91	2.72
7	SACHETAN	4	1	1	1	1	1	1	1	1	1	1	1	1.56	0.64	0.93
8	GKT	3	3	2	1	2	2	2	3	3	1	2	2	2.32	2.00	2.20
9	CREED	4	4	3	2	1	2	2	3	3	3	1	1	3.28	1.27	3.00
10	AF	4	4	4	3	2	3	3	4	2	2	1	1	3.68	2.28	2.47
11	HELP	4	4	3	3	1	2	2	4	3	3	1	1	3.47	1.27	3.28
12	MUK	5	3	2	1	2	3	3	3	3	2	3	1	2.49	2.32	2.47
13	ROVA	4	2	4	2	2	2	2	2	2	2	2	2	2.72	2.00	2.00
14	NABOLOK	4	1	2	3	1	3	3	2	2	2	2	1	2.32	1.72	2.00
15	BSDO	2	2	2	1	1	1	2	2	2	1	1	1	1.64	1.14	1.44
16	ATMABISW	3	2	2	3	2	2	2	2	3	2	2	2	2.47	2.00	2.32
17	VARD	3	2	2	3	2	3	3	3	3	2	3	1	2.49	2.32	2.47
18	NELS	3	2	3	1	1	3	3	2	3	1	1	1	1.93	1.64	1.83
19	SSUS	3	3	3	2	2	2	3	4	2	2	2	2	2.72	2.20	2.47
20	DDAN	3	3	3	3	1	3	2	2	2	2	1	1	3.00	1.56	2.00
21	ASUK	2	2	2	2	1	1	1	2	2	1	1	1	2.00	0.53	1.42
22	PDO	4	1	1	1	1	1	1	1	1	1	1	1	1.58	0.28	0.64
23	MBSK	3	3	3	3	2	2	2	3	2	3	2	1	3.00	2.06	2.73
24	TSSS	2	2	2	1	1	1	1	2	2	1	1	1	1.72	1.07	1.49
25	PMUS	4	1	3	3	2	2	2	2	2	2	2	2	2.49	2.00	2.00
26	DORP	2	2	3	3	1	1	1	2	2	2	1	1	2.56	1.07	2.00
27	SUS1	3	3	3	3	2	3	3	2	2	3	2	2	3.00	2.28	2.49
28	AHDO	2	2	2	2	1	4	3	2	2	2	2	1	2.00	1.82	1.93
29	ACD	3	2	2	3	2	2	2	3	3	1	1	1	2.47	2.00	2.11
30	SAPB	3	3	3	3	2	3	2	3	2	2	2	2	3.00	2.14	2.20
31	JRDM	3	3	3	3	2	2	2	2	2	2	2	2	3.00	2.00	2.00
32	ARCHES	2	2	2	2	1	3	3	2	2	2	1	1	2.00	1.56	2.00
33	JF	4	3	2	1	2	3	3	2	2	3	3	1	2.49	2.32	2.47
34	CEDAR	3	2	2	3	2	2	2	2	2	3	2	2	2.42	2.00	2.42
35	ASO	2	2	2	2	1	4	2	2	2	2	1	2	2.04	1.77	2.00
36	NEF	3	2	2	3	1	4	2	4	3	1	1	1	2.40	1.77	2.39
37	DBS	2	2	2	2	2	2	2	2	2	2	2	2	2.00	2.00	2.00
38	GUP	3	3	3	3	2	4	3	3	3	3	1	1	3.00	2.56	3.00
39	KPUS	4	4	3	3	1	4	3	3	3	3	1	1	3.47	1.78	3.00
40	NUSA	2	3	2	3	2	2	2	2	2	2	2	2	2.64	2.00	2.00
41	JKS	2	3	2	3	2	2	2	3	3	2	1	1	2.71	2.00	2.47
42	BEDO	2	3	2	2	2	2	2	3	3	1	2	2	2.47	2.00	2.17
43	BERDO	4	2	2	2	2	2	2	2	2	2	1	1	2.32	2.00	2.00
44	CODEC	2	4	2	1	2	2	2	2	2	2	2	1	2.44	1.93	1.98
45	ALWO	3	3	3	3	2	2	2	4	1	2	1	1	3.00	2.00	2.36
46	MAMATA	4	4	4	4	2	3	2	3	3	3	1	2	4.00	2.22	3.00
47	MUKTI	3	3	3	3	2	3	3	3	3	3	1	2	3.00	2.28	3.00
48	SUS2	3	3	3	3	2	3	2	2	3	3	1	1	3.00	2.14	2.72
49	SRZYONY	3	2	2	3	2	3	3	2	2	3	3	2	2.49	2.32	2.47
50	SOJAG	3	3	3	3	3	3	3	3	3	3	1	1	3.17	2.93	3.00
51	BRIDGE	3	2	2	3	2	3	3	2	2	3	1	1	2.47	2.31	2.44
52	SPUS	2	2	1	1	1	1	1	1	1	1	1	1	1.40	0.56	1.09
53	SHATPHO	2	2	1	1	1	3	1	2	1	1	1	1	1.62	1.28	1.32
54	SUSS	4	4	4	4	1	3	3	2	1	2	1	2	4.00	1.77	1.83
55	DAM	4	3	2	2	2	4	3	3	3	2	1	1	2.72	2.53	2.58
56	EWf	3	3	3	3	1	3	3	3	3	3	1	2	3.00	1.60	3.00
57	ARAB	3	2	2	2	2	2	2	2	1	3	2	2	2.28	2.04	2.14
58	ANTAR	3	3	2	2	1	3	2	3	3	2	1	1	2.56	1.56	2.47
59	CMES	3	2	2	3	2	2	2	2	3	2	2	2	2.47	2.00	2.20
60	GSS	3	2	2	3	1	3	2	2	2	2	1	1	2.47	1.56	2.00
61	AFID	2	2	1	1	1	2	2	2	2	2	1	1	1.53	1.32	2.00



Sl No	PO Name and	Overall Data (Level-I and Level-II) of 112 POs														
		GG3	GG4	GG5	GG6	EX1	EX2	EX3	SR1	SR2	SR3	PR1	PR2	CGG	CEx	CSR
62	PSFB	3	4	2	3	1	2	2	3	3	2	1	2	3.28	1.29	2.47
63	HOPE	3	3	3	3	1	1	1	3	1	1	1	1	3.00	0.87	1.60
64	GK	2	2	2	2	2	2	2	2	2	2	2	2	2.14	2.00	2.00
65	SGUS	1	1	1	2	1	1	1	1	1	1	1	1	1.28	0.64	0.93
66	POLLI SR	4	3	3	4	3	2	1	3	2	3	1	1	3.47	2.56	2.72
67	AGRAGATI	3	3	3	3	1	2	1	3	3	3	1	1	3.00	1.20	2.93
68	SAMADHAN	2	4	3	1	1	1	1	2	2	2	1	1	2.72	1.07	1.91
69	GE	2	2	2	2	1	1	1	1	1	1	1	1	2.00	0.77	0.83
70	UCEP	3	3	3	1	1	2	3	3	1	1	1	1	2.45	1.40	1.67
71	NDP	3	3	2	2	2	3	3	2	2	3	3	1	2.56	2.32	2.47
72	FDSR	2	2	3	3	1	1	1	3	1	1	1	1	2.44	0.73	1.60
73	HFSKS	3	2	2	3	2	3	2	2	2	3	1	1	2.49	2.17	2.47
74	SPUP	4	2	2	2	2	2	2	2	2	2	2	2	2.36	2.00	2.00
75	ENDEAVOU	2	2	2	2	2	2	2	2	2	2	1	1	2.07	2.00	2.00
76	VDF	2	2	2	2	2	2	2	2	2	2	1	1	2.00	2.00	2.00
77	DDJ	2	2	2	3	1	4	3	2	2	2	1	1	2.40	1.77	2.11
78	CARSA	4	2	2	2	2	2	2	2	2	2	2	2	2.32	2.00	2.00
79	DISA	4	3	3	2	2	4	2	2	2	3	2	2	2.72	2.42	2.47
80	SAVIOUR	4	3	2	2	1	1	1	3	2	2	1	1	2.62	1.07	2.28
81	GRAMAUS	3	3	3	3	2	3	3	3	1	3	2	1	3.00	2.32	2.47
82	PBK	2	2	2	2	1	1	1	2	2	1	1	1	2.00	0.84	1.47
83	Unnayan	4	4	3	3	2	2	3	4	4	3	1	2	3.56	2.13	3.47
84	BEES	2	2	2	2	1	1	2	2	2	1	1	1	2.00	1.14	1.53
85	DNP	3	2	2	2	1	3	3	3	2	2	1	1	2.28	1.60	2.20
86	PIPASA	3	3	2	2	2	2	2	2	2	3	2	1	2.64	2.00	2.47
87	PROGRESS	4	3	3	1	2	2	2	2	3	2	2	2	2.72	2.00	2.29
88	ASPADA	4	3	3	1	1	3	3	3	1	3	1	1	2.72	1.78	2.47
89	HUS	4	2	2	1	1	1	1	3	2	2	1	1	2.17	1.07	2.16
90	PUS	2	2	2	2	1	3	4	2	2	2	1	1	2.00	1.72	2.00
91	RESCU	2	1	2	1	1	1	1	2	2	1	1	1	1.72	0.93	1.56
92	DUS	3	2	2	2	2	2	2	2	2	2	2	2	2.45	2.00	2.00
93	KKS	3	2	2	3	1	1	2	2	2	2	1	1	2.56	1.27	2.00
94	PCD	3	3	3	3	1	1	2	3	2	2	3	1	3.00	2.17	2.32
95	NAZIR	4	2	2	2	1	1	1	2	2	2	1	1	2.44	0.95	2.00
96	LA	3	3	3	3	2	3	4	2	3	3	1	1	3.00	2.47	2.72
97	PPD	2	2	2	2	1	3	3	2	2	2	1	2	2.00	1.69	1.93
98	FS	3	1	1	1	1	1	1	2	1	1	1	1	1.45	0.93	1.28
99	GKF	3	3	3	3	2	3	2	2	2	3	3	1	3.00	2.20	2.44
100	ST	3	3	2	2	2	2	2	2	2	3	2	2	2.64	2.00	2.44
101	AVA	3	3	2	2	1	2	4	2	3	2	1	1	2.47	1.62	2.28
102	ANUVAB	3	3	2	2	2	2	2	2	2	2	1	1	2.44	2.00	2.00
103	SANGRAM	2	3	3	1	2	3	4	3	3	2	3	1	2.56	2.45	2.56
104	UP	2	3	3	2	2	3	3	2	2	3	2	1	2.72	2.33	2.47
105	TMSS	4	4	4	4	3	4	5	4	4	3	3	3	4.00	3.49	3.50
106	RRF	4	3	3	3	2	3	4	3	3	3	3	1	3.13	2.56	3.00
107	SSS	4	3	3	3	3	3	4	4	3	3	3	3	3.28	3.14	3.20
108	Uddipan	4	4	4	4	3	5	4	5	5	2	5	2	4.00	3.50	3.72
109	Swanirva	4	3	3	4	2	4	3	4	4	3	2	2	3.56	2.50	2.72
110	JCF	3	4	2	3	3	3	3	3	2	4	3	3	3.14	3.00	3.13
111	ASA	5	5	5	5	3	5	5	5	5	5	5	5	4.00	3.32	4.80
112	BRAC	5	5	5	5	5	5	5	5	5	5	5	5	4.00	4.00	4.47

## Dhaka University Institutional Repository

SL No	PO Name and	CPR	Score-L-I	Score-L-II	Legend	
1	Ad-din	1.14	3.67	3.67	Name	PO Name
2	AFAUS	2.00	3.94	3.94	Category	PO Category
3	Prodipan	1.78	0.84	0.84	YOS	Yr of Services.
4	PSKS	2.00	1.69	1.69	NoECMTY	No of EC meeting this Yr.
5	SJK	1.64	-0.50	-0.50	AGM	Last AGM Held
6	BASTAB	1.14	-0.52	-0.52	WA	PO Working Area
7	SACHETAN	0.41	-0.67	-0.67	PST	Provided Services Type
8	GKT	2.00	0.00	0.00	SoF	Sources of Fund
9	CREED	0.80	-0.72	-0.72	NBrP	No. of Branches-PKSF
10	AF	1.29	0.55	0.55	NBrNP	No. of Branches-NonPKSF
11	HELP	1.27	-0.70	-0.70	NSamMP	No. of Samitees-M-P
12	MUK	2.28	0.58	0.58	NSamFP	No. of Samitees-F-P
13	ROVA	2.00	-0.69	-0.69	NSamMNP	No. of Samitees-M-NP
14	NABOLOK	1.72	-0.54	-0.54	NSamFNP	No. of Samitees-F-NP
15	BSDO	1.00	-0.80	-0.80	NMemMP	No. of members-M-P
16	ATMABISW	2.00	-0.02	-0.02	NMemFP	No. of members-F-P
17	VARD	2.28	0.87	0.87	NMemMNP	No. of members-M-NP
18	NELS	1.20	-1.02	-1.02	NMemFNP	No. of members-F-NP
19	SSUS	2.18	-0.96	-0.96	NBorMP	No. of borrowers-M-P
20	DDAN	0.95	-1.00	-1.00	NBorFP	No. of borrowers-F-P
21	ASUK	0.45	-0.84	-0.84	NBorMNP	No. of borrowers-M-NP
22	PDO	0.00	-1.05	-1.05	NBorFNP	No. of borrowers-F-NP
23	MBSK	1.49	-0.09	-0.09	NStaffsM	No. of staffs-Male
24	TSSS	0.32	-1.06	-1.06	NStaffsF	No. of staffs-Female
25	PMUS	2.00	-0.43	-0.43	ALOSP	Amt.of Loan Outstanding-PKSF
26	DORP	0.59	-0.43	-0.43	ALOSNP	Amt.of Loan Outstanding-Non-PKSF
27	SUS1	2.14	-0.43	-0.43	DER	Debt Equity Ratio
28	AHDO	1.47	-0.74	-0.74	RR	Reserve Rate
29	ACD	0.77	-0.80	-0.80	IAPA	Income to APA
30	SAPB	2.00	0.25	0.25	OCAPA	Op. Cost to Avg.Perform Asset
31	JRDM	2.00	0.30	0.30	SR	Savings Rate
32	ARCHES	1.07	-0.78	-0.78	KTA	Capital to TA
33	JF	2.28	0.97	0.97	ROA	Return On Asset
34	CEDAR	2.00	-0.01	-0.01	DSCR	Debt Serv. Cov Ratio
35	ASO	1.28	-0.72	-0.72	OSS	Operational Self-sufficiency
36	NEF	0.60	-0.79	-0.79	CPTL	Cost Per Tk. Lent
37	DBS	2.00	-0.31	-0.31	PAR	Portfolio At Risk
38	GUP	0.95	-0.03	-0.03	KTAW	Cap to Asset without FA
39	KPUS	0.95	-0.56	-0.56	ROE	Return On Equity
40	NU\$A	2.00	0.19	0.19	CR	Current Ratio
41	JKS	0.95	-0.39	-0.39	ODR	On Demand Relization
42	BEDO	2.00	-0.01	-0.01	CA	Capital Adequacy
43	BERDO	0.33	-0.82	-0.82	AQ	Asset Quality
44	CODEC	1.64	-0.41	-0.41	Mgt	Management
45	ALWO	0.95	-0.80	-0.80	Earnings	Earnings
46	MAMATA	1.27	-0.22	-0.22	Liquidity	Liquidity
47	MUKTI	1.51	-0.85	-0.85	GG1	Service charge (GG1)
48	SUS2	0.84	0.31	0.31	GG2	Loan class. (GG2)
49	SRYZONY	2.28	0.88	0.88	GG3	Reserve (GG3)
50	SOJAG	1.09	1.08	1.08	GG4	Business plan (GG4)
51	BRIDGE	0.77	-0.37	-0.37	GG5	Cash flow Proj. (GG5)
52	SPUS	0.27	-0.93	-0.93	GG6	Internal control (GG6)
53	SHATAPHO	1.00	-0.76	-0.76	EX1	Progm. coverage (Ex1)
54	SUSS	1.40	-0.60	-0.60	EX2	Response in disaster (Ex2)
55	DAM	1.18	1.08	1.08	EX3	Interest rate (Ex3)
56	EWf	1.27	0.36	0.36	SR1	Ethical practices (SR1)
57	ARAB	1.93	-0.08	-0.08	SR2	Over indebtbness (SR2)
58	ANTAR	0.77	-0.82	-0.82	SR3	Good Govt practices (SR3)
59	CMES	2.00	0.00	0.00	PR1	Nos of EC meeting held (PR1)
60	GSS	0.77	-0.99	-0.99	PR2	Last AGM held (PR2)
61	AFID	1.20	-0.87	-0.87	CGG	Commitment to GG

SL No	PO Name and	CPR	Score-L-I	Score-L-II	Legend	
62	PSFB	1.27	-0.62	-0.62	CEx	Commitment to Ex
63	HOPE	0.55	-1.00	-1.00	CSR	Commitment to SR
64	GK	2.00	-0.78	-0.78	CSP	Commitment to SP
65	SGUS	0.14	-1.05	-1.05	Dis1 1	Dis Scores from Fun 1 for Analysis 1
66	POLLI SR	0.91	-0.23	-0.23	Dis1 2	Dis Scores from Fun 1 for Analysis 1
67	AGRAGATI	1.09	-0.93	-0.93		
68	SAMADHAN	0.95	-0.65	-0.65	Name	PO Name
69	GE	0.67	-0.87	-0.87	Category	PO Category
70	UCEP	0.84	-0.74	-0.74	YOS	Yr of Services.
71	NDP	2.28	0.94	0.94	NoECMTY	No of EC meeting this Yr.
72	FDSR	0.20	-0.91	-0.91	AGM	Last AGM Held
73	HFSKS	0.95	-0.28	-0.28	WA	PO Working Area
74	SPUP	2.00	-0.49	-0.49	PST	Provided Services Type
75	ENDEAVOU	0.95	-0.81	-0.81	SoF	Sources of Fund
76	VDF	1.11	-0.78	-0.78	NBrP	No. of Branches-PKSF
77	DDJ	1.02	-0.59	-0.59	NBrNP	No. of Branches-NonPKSF
78	CARSA	2.00	-0.85	-0.85	NSamMP	No. of Samitees-M-P
79	DISA	1.86	0.13	0.13	NSamFP	No. of Samitees-F-P
80	SAVIOUR	0.59	-1.05	-1.05	NSamMNP	No. of Samitees-M-NP
81	GRAMAUS	1.64	0.01	0.01	NSamFNP	No. of Samitees-F-NP
82	PBK	0.41	1.17	1.17	NMemMP	No. of members-M-P
83	Unnayan	1.27	3.05	3.05	NMemFP	No. of members-F-P
84	BEES	0.73	2.02	2.02	NMemMNP	No. of members-M-NP
85	DNP	0.59	-1.02	-1.02	NMemFNP	No. of members-F-NP
86	PIPASA	1.62	-0.47	-0.47	NBorMP	No. of borrowers-M-P
87	PROGRESS	2.00	-0.04	-0.04	NBorFP	No. of borrowers-F-P
88	ASPADA	0.77	-0.48	-0.48	NBorMNP	No. of borrowers-M-NP
89	HUS	0.77	-0.69	-0.69	NBorFNP	No. of borrowers-F-NP
90	PUS	1.07	-0.81	-0.81	NStaffsM	No. of staffs-Male
91	RESCU	0.64	-1.02	-1.02	NStaffsF	No. of staffs-Female
92	DUS	2.00	-0.18	-0.18	ALOSP	Amt.of Loan Outstanding-PKSF
93	KKS	1.11	-0.58	-0.58	ALOSNP	Amt.of Loan Outstanding-Non-PKSF
94	PCD	2.13	-0.03	-0.03	DER	Debt Equity Ratio
95	NAZIR	0.91	-0.13	-0.13	RR	Reserve Rate
96	LA	0.95	-1.01	-1.01	IAPA	Income to APA
97	PPD	1.45	-0.50	-0.50	OCAPA	Op. Cost to Avg.Perform Asset
98	FS	0.76	-0.91	-0.91	SR	Savings Rate
99	GKF	2.14	-0.05	-0.05	KTA	Capital to TA
100	ST	2.00	0.33	0.33	ROA	Return On Asset
101	AVA	1.18	-0.91	-0.91	DSCR	Debt Serv. Cov Ratio
102	ANUVAB	0.64	-1.46	-1.46	OSS	Operational Self-sufficiency
103	SANGRAM	2.20	1.28	1.28	CPTL	Cost Per Tk. Lent
104	UP	1.32	2.82	2.82	PAR	Portfolio At Risk
105	TMSS	2.89	3.31	3.31	KTAW	Cap to Asset without FA
106	RRF	2.32	2.04	2.04	ROE	Return On Equity
107	SSS	3.00	3.05	3.05	CR	Current Ratio
108	Uddipan	3.49	3.27	3.27	ODR	On Demand Relization
109	Swanlrva	2.00	1.86	1.86	CA	Capital Adequacy
110	JCF	3.00	2.90	2.90	AQ	Asset Quality
111	ASA	4.00	-0.20	-0.20	Mgt	Management
112	BRAC	3.47	3.47	3.47	Earnings	Earnings