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DIPLOMOVÁ PRÁCE

Microfinance and Microcredit
Sustainability of MFIs and Impact of the Financial
Crises

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ABSTRACT

The nearly one-sixth of the world's population lives with income lower than US\$ 1 per day. These poor people are classified as non-bankable because of their low or no income, no steady employment, no collateral or no credit history. Despite of these facts, the potential of credit markets in developing countries is high. The microfinance system tries to help these people to establish their own profitable businesses and cross the border of poverty. In these days, microfinance sector has estimated customer base of more than 66 million borrowers globally. Many of MFIs became strong and financially sustainable institutions, unfortunately sometimes they forgot what the initial purpose of their existence was and are focused more on profit than social mission. The microfinance sector is known for its adaptability and quite healthy survival of past financial crises. However, current global financial crisis is testing the resilience of MFIs hardly. The MFIs are much more connected to international financial markets and certainly, they will not survive the crisis without any scratches.

ABSTRAKT

Téměř šestina světové populace žije s příjmem, který nepřevyšuje 1 US dolar na den. Tito lidé jsou při žádosti o půjčku komerčními finančními institucemi odmítáni pro jejich nízký, často žádný příjem, žádné trvalé zaměstnání či žádné finanční rezervy nebo majetek, který by mohl sloužit jako záruka za půjčku. I přes tyto skutečnosti, potenciál, který skrývají trhy s půjčkami v rozvojových zemích, je obrovský. Mikrofinanční instituce se snaží tento potenciál využít a pomoci tak chudým lidem překročit hranici chudoby poskytováním nízkých půjček určených k podnikání. V současnosti je počet klientů mikrofinančních institucí odhadován na 66 milionů celosvětově. Mnoho mikrofinančních institucí se během doby vyvinuly v silné a finančně nezávislé instituce. Bohužel, některé z nich se zpronevřily svému původnímu účelu a zaměřili se více na zisk. Jak je známo, mikrofinanční instituce a jejich klienti mají nesmírnou schopnost se přizpůsobit. Minulé finanční krize přežila většina mikrofinančního sektoru bez větší újmy. V současnosti jsou však mikrofinanční instituce mnohem více propojeny se světovým finančním trhem a tak tato globální finanční krize určitě neponechá mikrofinanční sektor bez následků.

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List of Acronyms

ASCA	Accumulating Savings and Credit Association
BRI	Bank Rakyat Indonesia
CBA	Cost-benefit Analysis
CEA	Cost-Effectiveness Analysis
CDO	Collateralized Deposit Obligation
CGAP	Consultative Group to Assist the Poor/World Bank
DFI	Development Finance Institution
GB	Grameen Bank
GDP	Gross Domestic Product
GNP	Gross National Product
IBRD	International Bank for Reconstruction and Development/World Bank
ID	National Identification Number
IDB	The Inter-American Development Bank
IFC	International Finance Corporation/The World Bank
IPO	Initial Public Offering
MFI	Microfinance Institution
myELEN	Electronic Loan Exchange Network
NGO	Non-Governmental Organisation
PROGRESA	Programa de Educación, Salud y Alimentación, Mexico
ROA	Return on Assets

ROE	Return on Equity
ROSCA	Rotating Savings and Credit Association
SDI	Subsidy Dependence Index
SHG	Self-help Group
SEWA	Self-Employed Women's Association, Ahmedabad, India
SME	Small and Medium Enterprises
UNDP	United Nations Development Program
WOCCU	World Council of Credit Unions

1. Introduction

In the recent years, the item “microfinance” occurs in the centre of many economical debates. This word brought heavily to public’s attention around year 2006 when Mr. Muhammad Yunus and his Grameen Bank in Bangladesh were jointly awarded the Nobel Peace Prize "*for their efforts to create economic and social development from below*"¹. But Grameen Bank exists and tries to help the poorest in developing countries for more than three decades. The idea of help to the poorest by system of small loans with regular, frequent and fixed instalments over time was born in minds of individuals who could see and/or imagine how the life of poor can be hard and how can be improved. The Irish loan funds existing in 18th century can be considered as one of the first Microfinance Institutions (MFIs).

The poor are often qualified as un-bankable, that means they cannot receive loans from common finance institutions and non-official ways to borrow money are usually expensive, sometimes risky and in many cases also long-lasting. This innovative system can become a tool to reduce poverty and to improve lives of the poor. The protagonists of system of microcredits argues that access to credit, even if small amounts, can unfasten the productive potential of poor households as small entrepreneurs. A typical feature of microcredit contracts is that borrowers must usually repay loans in weekly or monthly instalments beginning at the very start of the loan. Practically before the investment can be expected to bear any fruit. Therefore, money for paying first instalments must come from other resources of households, like wage or savings. The process of microcredit can be studied similarly to the process of microsavings. This point of view will be analysed in one of the following chapters.

In the second chapter of this work, we focused on definition of the poor and their possibilities to break through the poverty barrier. In addition, we compared microfinance institutions, commercial banks and other sources of capital in relation to the poor. One subchapter is dedicated to progression from the term “microcredit” to “microfinance”.

In the third chapter, the microfinance principles are discussed – such as group lending, dynamic incentives or focus on women.

¹ The Nobel Peace Prize for 2006: http://nobelprize.org/nobel_prizes/peace/laureates/2006/press.html

In the following two chapters, we pursue the historical development of microfinance institutions from first mentions in Ireland in 18th century to well known Grameen bank and their financial sustainability. The progress of MFIs from social to profit driven institution has its own difficulties. We discuss the sources of subsidies, their forms and diverse measurements of subsidy-dependence of MFIs.

The sixth chapter is focused on the impact of MFIs on population. Different measures of impact of MFIs are discussed there as well as particular effects, which can be seen in reality.

Finally, the last chapter is focused on existence of MFIs in the light of financial and economic crisis in recent years. First two sub-chapters are dedicated to survival of microfinance system of two crises of 1990s – Asian crisis and Latin American crisis. The last sub-chapter describes the behaviour of MFIs in the situation of currently deteriorating financial conditions worldwide.

2. The Poor and Lenders

2.1 Who Are the Poor?

The poverty is a multidimensional phenomenon. It does not encompass just low income but the poor have to face material deprivation, low consumption, lack of services, low human development and not being able to influence decisions that affect their own lives. Moreover, they face extreme vulnerability ill health, economic depressions and natural disasters. They live without essential health facilities, access to drinking water, fruitful land, frequently without adequate shelter. The children from poor families often suffer from undernourishment, retarded mental and/or physical development and no access to basic education. Ill-being among the poor is widespread, which decreases their productivity, reduces family incomes and resources for education and nourishment of their children. The average death rate as well as infant and child mortality rates are much higher among the poor.

As the definitions of poverty varied across the world, the World Bank has established *official poverty and extreme poverty line as US\$ 2 and US\$ 1 per day per person*, respectively, in 1993 purchasing power parity prices to allow international comparison. The “US\$ 1 poverty line” is seen as the minimum amount necessary for survival of an individual. The poverty can be seen in *absolute or relative terms*. The *absolute poverty line* is explicitly linked to a specific welfare level. So, the absolute poverty is characterized as the serious lack of essential needs as nutrition, housing, health services, safe drinking water, sanitation facilities and education. Anchoring the poverty line in this way allows making comparisons over time and across groups in contrast to poverty in relative terms. The *relative poverty line* is determined from percentage cut-off point in the welfare distribution². This approach is simple and transparent but has two principal disadvantages. The relative poverty line cannot be used for monitoring poverty over time and/or space. There is always a bottom segment of the population even if living standards for the whole population have risen in time. The relative poverty line is essentially quite arbitrary. It is not clear why poverty should be defined in terms of one

² It can be income or consumption level below which the bottom segment, for example 30 percent, of the population is located. Alternatively, it can refer to a cut-off point such as one-half the median income.

percentage point instead of another—and what percentage point is settled upon can have a bearing on the characteristics of the population subgroup designated as poor (Lanjouw, 2000).

There are several poverty measurement methods – *normative and non-normative methods*. The normative methods define an exact borderline based on a minimum living standard valid for the whole population, compared with the household or individual observed. The normative methods can be divided into three main groups – *the Unsatisfied Basic Needs method, the Poverty Line method and combined methods*. Non-normative methods define a threshold based on a notion, which does not relate to any concrete indicator, using relative comparative measures.

The poverty lines can be indicated on *nutrition-base, minimum wage base or income-base*. By these standards, we can use several indicators – just *Poverty Head Count (HC), Head Count Ratio (HCR), Poverty Gap Ratio (PGR) and Income Gap Ratio (IGR)*. The first two can be examples of the *Poverty Line Method*. The first one is simple amount of people living under the threshold ($y_i < p$) and the second one is expressed as the percentage of population living under the threshold ($HCR = HC/n$). The PGR, is often considered as representing the depth of poverty, is the mean distance separating the population from the poverty line (with the non-poor being given a distance of zero), expressed as a percentage of the poverty line. The IGR is not a good measure of poverty. If some household close to the poverty line improved their standards and became non-poor, the IGR will increase because the mean distance separating the poor from the poverty line will increase, so nobody is worse off and somebody is actually better off³. The problem with the IGR is that is defined only on the poor segment of population, while the PGR is defined over the whole population. The PGR is useful statistic to assess how much resources would be needed to eradicate poverty through cash transfers perfectly targeted to the poor⁴.

³ $PGR = \sum_{y_i < p} (p - y_i) / n.m$ and $IGR = \sum_{y_i < p} (p - y_i) / p.HC$, n – size of population

⁴ http://siteresources.worldbank.org/INTPA/Resources/tn_measuring_poverty_over_time.pdf

Table 1: Normative Poverty Measurement Methods

Unsatisfied Basic Needs Method	Needs of specific items in specific geographical areas are identified: a minimum threshold is predefined in each dimension (i.e. literacy, piped water or protein requirements) and the proportion of population below that threshold is calculated for each geographical area. The weighted indicators obtained for specific area, are synthesized into one composite index called UBN Area Integrated Sectorial.
Poverty Line Method (Income approach)	The poverty line method labels the individuals and households as poor if their income or consumption expressed in money units falls below a certain line, usually defined as a minimum socially acceptable level of well being, to survive. This minimum level is called the “poverty line” ⁵ .
Combined Poverty Measurement Methods	The UBN methods and Poverty line Methods serve in some case as a more exact indicator when combined, as they can make use of the defined income lines as well as of the UBN needs thresholds.

Source: Hes, 2002

Since 1990s, the extreme poverty in the developing world⁶ has been measured by a standard representing the poverty line – US\$ 1 per a day per person in 1985 prices. This was subsequently revised to US\$ 1 and than to US\$1.08 per day per person measured in 1993 purchasing power parity. In recent report from the World Bank, the measure of absolute extreme poverty has been changed to US\$ 1.25 per day per person. The reason for this change is improved cost-of-living data for developing countries⁷. Still we can find that US\$ 1 per day poverty line is used as anchor in many studies and literature, even here.

At the start of the new century in 2000, of the world’s six billion people, 2.8 billion people lived on less than US\$ 2 a day and 1.3 billion below the extreme poverty line. 44 percent of those who earn less than US\$ 1 a day lived in South Asia, 24 percent in Sub-Saharan Africa, 23 percent in East Asia and Pacific, 6.5 percent in Latin America and 2 percent in Europe and Central Asia. Moreover, half of the human population lived in hygienically inappropriate conditions, eight out of every 100 children did not survive their fifth birthday, 27 percent of population had no access to drinking water and 150 million of children in the developing countries were malnourished.

⁵ The most often used Poverty Line Method is the Food Standard Basket method. Specific food basket is defined for the average individual in each country, based on recommended nutritional requirements. These quantities of food, satisfying the individual consumption in terms of proteins and calories, are multiplied by the actual prices of the relevant food and the result is the national per capita extreme poverty line.

⁶ The developing world means all low and middle-income countries.

⁷ The revised international poverty line of US\$ 1.25 per day per person in 2005 prices is a good standard for assessing extreme poverty because it is taken as an average of the national poverty lines for the world’s poorest 10 to 20 countries. (Daley-Harris, 2009)

The poverty estimations published by the World Bank in 2005 showed that 1.4 billion people (25.19 percent of the world's population) were living on less than US\$ 1.25 a day, visible downturn from 1.9 billion in 1981 (51.87 percent of the world's population) – a strong progress toward reducing poverty. Poverty of the world's poorest region in 1981 – East Asia – has fallen from nearly 80 percent in 1981 to under 20 percent of the population (about 316 million) living on less than US\$ 1.25 a day in 2005. The biggest progress in poverty reduction was done in China. Poverty in South Asia has also fallen from 60 to 40 percent over the same period (about 600 million in 2005). In Sub-Saharan Africa, there was no sustained decline over the period – still oscillating around 50 percent. In absolute terms, the number of the poor has almost doubled from 200 million to 390 million. For middle-income countries, the US\$ 2 poverty line is more appropriate. By this standard, the poverty rates have fallen in Latin America and the Middle East and North Africa from 1981, but with no reduce of the total number of the poor. But the same rate has risen in Eastern Europe and Central Asia since 1981, with little signs of progress since the late 1990s.

The last data from World Bank indicate that 986 million people lived below the US\$ 1 a day threshold in the developing world and *1.2 billion living on less than US\$ 1 worldwide in 2007*. These are numbers from the end of the year 2007 by Microcredit Summit Campaign for particular regions – 123 million families live below extreme poverty line in Asia, 60.4 million families in Africa and Middle East, 9.4 million in Latin America and Caribbean and 0.8 million in Eastern Europe and Central Asia.

In the same report, we can find interesting numbers relating to MFIs worldwide and their clients. At the end of year 2007, 3,552 microcredit institutions worldwide reported reaching 154,825,825 clients, where 106,584,679 of them were among the poorest when they took their first loan. Of these poorest clients, 83.4 percent (or 88,726,893) were women. The number of very poor women has grown from 10.3 million at the end of 1999 to 88.7 million at the end of 2007. This was a 764 percent increase reached in the eight-year period (!). The increase represented an additional 78 million poorest women receiving microloans through this period.

Approximately 90.6 percent of the poorest clients reported were in Asia, a continent where approximately 63.5 percent of the people living on less than US\$ 1 a day live. The growth from 7.6 million poorest at the end of 1997 to 106.6 million poorest at the end of

2007 represents an increase of 1,302 percent during ten-year period. 94 million of the poorest clients reached in 2007 (or 88.2 percent) were being served by the 76 largest individual microfinance institutions and networks, all with more than 100,000 clients. Of the 3,552 microfinance institutions that have been reported in Microcredit Summit Campaign Report 2009, 935 were in Sub-Saharan Africa, 1,727 were in Asia and the Pacific and 613 were in Latin America and the Caribbean.

The loans advanced to 106.6 million poorest clients in reality affected 533 million people, including both clients and their family members (expected five members of family in average). The 533 million people affected nearly equal the total population of Latin America. Just as an example, countries, in which more than half of the population lives below the international poverty line include Guatemala, Guinea-Bissau, India, Kenya, Lesotho, Madagascar, Nepal, Niger, Senegal, and Zambia⁸. More than 60 percent of the world's poor inhabit fragile and highly vulnerable areas, arid and semi-arid lands and forests.

2.2 Microcredit or Microfinance

What does *microcredit* mean? The original idea was just in the extension of lending small amounts to very poor, often unemployed people without any collateral, to help them live better⁹. Just small credits can help these people to repay their previous loans and start their own new business. The amount of credit is smaller and the credit cycle is shorter than standard loans of commercial institutions – typically from six to twelve months with weekly or fortnightly instalments. The system of instalments; built on regular, fixed small instalments starting very early after contract is signed; is less encumbering for clients but is more exacting from administrative aspect.

The interest rate of microcredits seems to be very high in comparison with standard bank loans in developed part of the world. The interest earnings should cover the probability of default, inflation and mainly the administrative costs; they can be 10 – 25 %

⁸ The size of the whole population of Bangladesh is about 125 millions of people, of which 56 percent live below the extreme poverty line.

⁹ The poor means at least 900 million households around the world.

of the sum of credits advanced by MFI. The most of MFIs are financed externally by international organizations, NGOs or the state budgets – the measure of dependence on this revenue and self-sustainability should be the talking point in following chapters.

“What is microfinance? Microfinance refers to small-scale financial services – primarily credit and savings – provided to people who farm or fish or herd; who operate small enterprises or microenterprises where goods are produced, recycled, repaired, or sold; who provide services; who work for wages or commissions; who gain income from renting out small amounts of land, vehicles, draft animals, or machinery and tools; and to other individuals and groups at the local levels of developing countries, both rural and urban.”

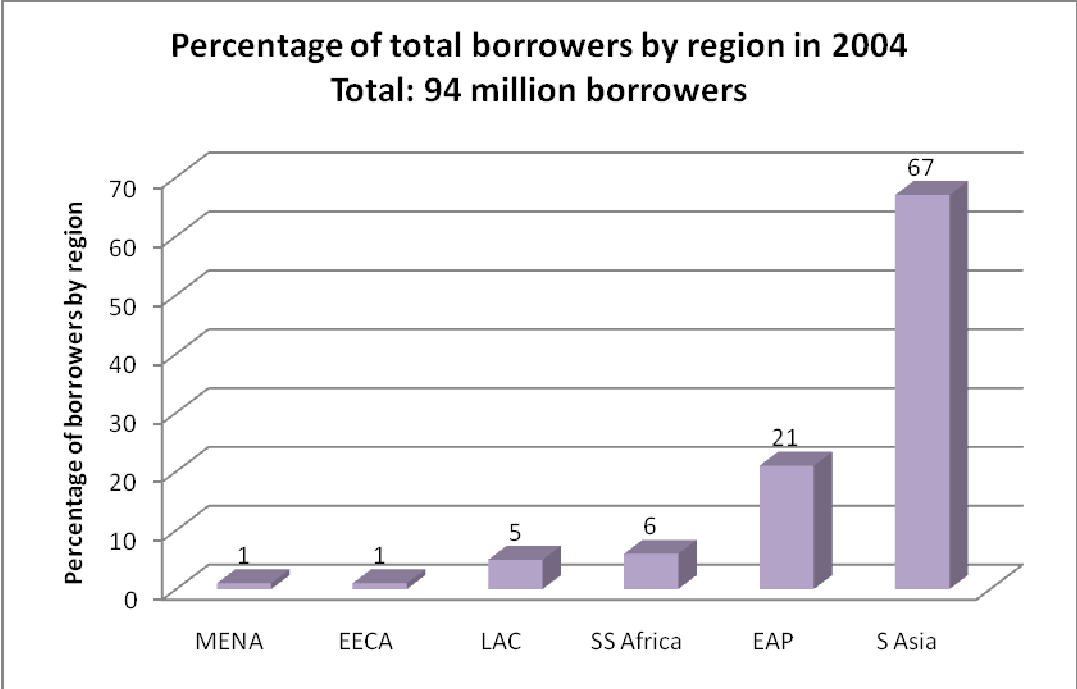
Robinson, 2001

Thus, the broader definition of *microfinance* includes not only microcredits but also other financial services, which can be offered to the poor. Interested economists found soon that not only small credits but also other services connected with lending could improve economic lives of the poorest. In these days we can include also improvement in health care and infrastructure to the system of microfinance. The most of MFIs connect their credit services also with educational or saving programs or business trainings, retraining scheme or technical trainings. Logically the investments can be more profitable when the people have access to training, which can improve their skills. The costs of these programs obviously increase the interest rates but the gains for both the borrowers and MFIs outweigh them. For example in organisations as *Pro Mujer* and *Freedom for Hunger*, the training is a central part of the provision of credit. The courses for dressmakers are very common. After successfully passing the course, women can ask for credit on the sewing machine. The training needs to be focused not only on business or technical skills, but also for better knowledge of proper nourishment - mostly of children: the nutritious foods to feed children, the importance of breast feeding or how to treat a child with diarrhoea (McNelly, Watetip, Lassen and Dunford, 1996).

Various researches found that the poor do not have all the expenditures in small sums like for clothing and food. From time to time they need also bigger amounts necessitated by different situations. Some can be predictable like a dowry, the education of

children, home building and festivals. Very poor people spend surprisingly lot for various festivals (Banerjee and Duflo, 2006). Another situations can be unpredictable like emergency cases such as a sudden sickness and injury or wars, floods or other natural disasters. Finally yet importantly, the poor can face an investment opportunity such as buying land or other productive assets or setting up a new business. For these cases people should have some savings, but poor people have difficulties to save in traditional institutions or at home, thus, they try to make use of other non-official ways like *deposit collectors, credit cooperatives* or *Rotating Savings and Credit Associations (ROSCA)*. Here is a place for another innovative component of microfinance – *microsavings*.

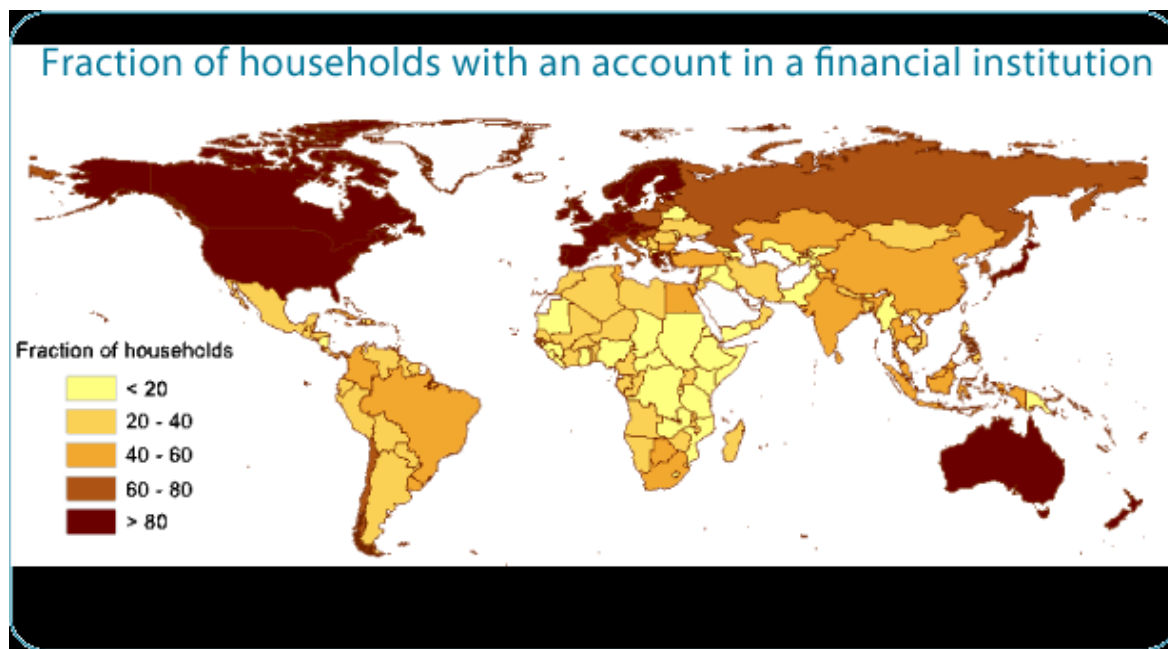
Figure 1: Percentage of Total Borrowers by Region in 2004



Source: Bauer, lectures¹⁰

¹⁰ Abbreviations: MENA = Middle East & North Africa, EECA = Eastern Europe & Central Asia, LAC = Latin America & The Caribbean, SS Africa = Sub Saharan Africa, S Asia = South Asia, EAP = East Asia & Pacific

Figure 2: Fraction of Households with an Account in a Financial Institution



Source: <http://econ.worldbank.org>

2.3 Traditional Banks and Other Lenders

2.3.1 Traditional Banks and Moneylenders

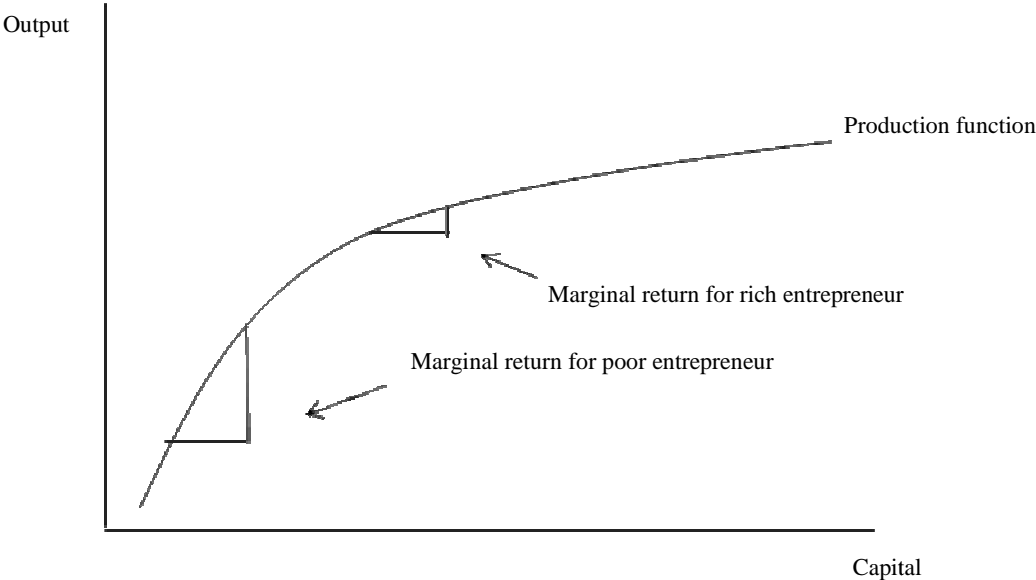
Traditional banks never (or hardly ever) provide financial services to the poor clients. And there are many logical reasons why they do not do that. The problem of *adverse selection* and *information asymmetry* (ex ante as well as ex post moral hazard) is really hard. The poor have no or very little income, steady employment and cannot offer any collateral, which banks require. The poor clients have no credit history, banks are too far away to verify and observe their behaviour – there is little information. And last but not least, the loans are generally far too small compared to transaction costs (bad information, no addresses, no infrastructure...).

One of the first principles, which we can learn in economics, is *principle of diminishing marginal returns to capital*. This says that enterprises with little capital sources should be able to earn higher returns on their investments than enterprises with much bigger scale of capital for the same type of investment. A conclusion can be that poor entrepreneurs should be able to pay banks higher interest rates than the richer ones. Thus, capital should flow from banks to poor enterprises without problems. In broader

meaning capital should flow from the rich to the poor elsewhere (Lucas, 1990; Alvaro, 2005). However, as we know this is not true in reality.

The principle of diminishing marginal returns to capital is derived from the assumption that production function has a concave shape, so more investment generates more output, but every additional unit of capital brings smaller (additional) marginal gains. Among the reasons why this principle is not enough for inflow of capital to the poor are things mentioned above: incomplete information, information asymmetry, adverse selection, moral hazard, poverty and lack of collateral, big transaction costs...

Figure 3: The Principle of Diminishing Marginal Returns to Capital



Source: Morduch, 2005

The explanation of these problems can be found in the theory of contracts: the *principal-agent relationship*, where the principal is the lender - a bank with enough capital

and the agent is a borrower with an idea but no capital (Macho-Stadler and Perez-Castrillo, 2001). The bank faces three information problems: lack of reliable information about quality of borrowers, inability to observe borrowers efforts (low effort or just bad luck) and inability to observe profits of project.

The *adverse selection problem* arises when the bank is unable to distinguish between risky and safe borrowers. There are no central databases listing information on qualities of individuals as borrowers (e.g. credit history, health, criminal records). The costs of collecting this information about every borrower with bank's own means are usually prohibitive. The average size of the credit is too low to make an effort to do that. The banks would like to charge risky borrowers by higher interest rate to compensate the higher possibility of default, but when they cannot discriminate, the conclusion is only one: the interest rate is so high that safe borrowers are discouraged from borrowing and they are going out of the market, thus the average interest rate is further increasing. Incomplete information is the source of inefficiency.

The *problem of ex ante moral hazard* occurs when a bank is unable to observe the effort of borrowers. The borrower will not shirk only in case when interest rate does not exceed gains from the project reduced by cost of effort¹¹. This problem can be solved by existence of collateral, which ensures that borrowers make the full effort required for the project to be successful.

The last big *problem of ex post moral hazard* occurs when the lender does not fully observe borrowers' profit. This problem can be solved by existence of collateral or innovative components of microfinance as peer monitoring and social sanctions. All these problems are logically worse in an environment where judicial system is on very low level of development and the legal enforcement is very difficult even if lenders are able to observe borrowers' profit.

Despite these facts, the potential of credit markets in developing countries is high. Potential entrepreneurs are usually missing starting seed capital, but returns on certain small businesses are fairly high. The returns on businesses in agriculture and trade can be above 100 % annually (Mexico, Ghana, Kenya). According to empirical evidence, annual returns on investments in microenterprises often exceed 100 percent.

¹¹ The equation $R < y - c/(1-p)$ must hold, where R is interest rate, y is profit, c is cost of effort and p is probability of positive profit y .

Instead of traditional banks, the poor can use *informal ways* get loans from moneylenders, neighbours, relatives, relatively rich families or local traders. The moneylenders often charge extremely high interest rates because they have to offer unsecured loans, the risk of default by the borrower is usually high and the judicial system is often weak in these poor regions. Nominal interest rates for small one-day loans can range from 5 to more than 20 percent. The 5 – 10 percent range for one-day loans is equivalent to range of monthly effective rates of 332 – 1,645 percent (!). In comparison, the sustainable MFIs can charge nominal effective rates between 2 and 5 percent a month (Robinson, 2001)¹². Despite of this unpleasant effect the local moneylenders can overcome all the problems discussed above. They have enough information about borrowers because they are usually living in the neighbourhood - no information asymmetry, minimizing transaction costs and no problem with adverse selection. In addition, they have also means how to enforce paying of a debt as social pressure or violence - no problem with moral hazard.

2.3.2 Other Sources of Capital (ROSCAs and Credit Unions)

2.3.2.1 The ROSCAs

People can lend from members of their family, broader relatives or friends. This is based on principle of reciprocity and often with no interest rates charged. Other option is lending from expensive moneylenders. *The Rotating Saving and Credit Associations (ROSCAs)* and credit cooperatives are situated somewhere between these two options. Both of them are based on principle of group lending, ROSCAs are based on informal agreement of individuals but more complicated credit cooperatives have a formal constitution and legal framework. We can say that these options present more possibilities how to save.

ROSCAs have simple structure. The base principle is an informal agreement of group of individuals (friends, neighbours, ...) to voluntary contribute money to a common pot that is allocated to one member of the group each period. At regular – for instance monthly – intervals, the members meet to collect contributions and allocate them to one member. Each member has only one possibility to receive whole amount during one cycle.

¹² Moneylenders usually calculate their interest rates on flat rate basis, on the original loan balance.

The sequence of recipients is decided at the first meeting by lottery (“picking names from a hat”). The length of ROSCAs is clearly known at the beginning. Sizes of ROSCAs can vary from five to over one hundred members and collected amount can be in range of 25 – 400 dollars. The system of ROSCAs does not need any physical place to store money because on the same day when the funds are collected, they are directly distributed.

The ROSCAs are local institutions, the members are usually friends or neighbours who know each other well (principle of peer monitoring). The advantage of ROSCAs is that the time when members can use the whole amount is shorter than the time needed for saving the same amount on their own. In reality, it is profitable for all members except the last person in the line. Thus, people have to have also other reasons to join ROSCAs. One reason can be that people have no better way to save, no institutions for small savings. In many researches in developing countries, we can find that people are afraid to save at home. Persons who want to save – women in most cases – are trying to store their money out of the household, rather away from their husbands. Another problem can be fear of theft, misuse by other family members or just impatience of the saver. In the case of the last person in line, system of lottery is also very important. It seems to be fair and provides the best incentives for the last person in line. Because of unbroken sequence of cycles, he can expect to be in the middle on average in the next cycle.

Another problem can occur when the member who just received the whole amount tries to take the money and not repay his contributions in other rounds. This menace is partly solved at the beginning when members are chosen; when they know each other, they should exclude the “risky” ones – adverse selection. When the cycle is in process then ROSCAs rely on potential penalties for dishonest members. One possible sanction is exclusion of the absconders from future cycles of the ROSCAs. Social sanctions play an important role in the form of an expulsion from social and religious events or disdain of whole village.

For sure, the system of ROSCAs has also his disadvantages. The system is not much flexible. The size of contributions and the pot cannot change during the cycle. And bigger pot for next cycle requires either bigger contributions or new members, which can lead to problems in management and/or lengthens the cycle. Other problem is that ROSCAs can mobilize capital funds only inside the given group. There is no moving of the resources across independent individuals or groups. This is an opportunity for MFIs.

The possible solution of small flexibility is so-called bidding ROSCAs. The whole amount is not allocated by order from lottery but it is distributed each period to member who is willing to pay the most for it. The rest of members receive the proceeds. For those who primarily wish to save, the bidding ROSCAs provide a return to saving not available under the other forms and members do not need to take the pot at a prescribed moment. For those bidding on the pot, the ROSCAs provide access to money when it is needed, albeit at a cost. In this way, the bidding ROSCA can help mitigate risk in difficult times. One problem, of course, is that there may be multiple bidders seeking the pot during downturns. A bidding war leads to a result that may be economically efficient but not necessarily equitable; when needy poorer households can be easily outbid (Morduch, 2005). In this light, credit cooperatives seem to be more flexible institutional solution.

2.3.2.2 The Credit Unions

The roots of *credit cooperatives* or *credit unions* can be found in 19th century in Germany when Friedrich Wilhelm Raiffeisen, a village mayor, founded the first rural credit union in the village of Heddesdorf in 1864. His aim was to help financially to poor inhabitants in the neighbourhood. Typical loans of Raiffeisen's unions had ten-year duration and were made for farm investments. The credit movement spread abroad during the century, at first to Ireland, Italy and Japan, later to Korea, Taiwan, Canada, the United States and Latin America. Thanks to the British Empire, the credit unions were spread also to India and other parts of South Asia¹³. By 1913, over 15,000 institutions were operating in Germany and over 2 million Germans were their members.

A chief advantage against ROSCAs is that savers do not have to wait for their turn in order to borrow, they are no longer required to borrow at all – they can be only savers – and the size of loans can vary if borrowers need. Like in ROSCAs, the members are people from neighbourhood who know each other and there is again the threat of social sanctions in case of dishonesty. Defaulting borrowers can even lose their shares in the credit union.

Another advantage is that credit unions are cooperative financial institutions that are owned and controlled by its members and operated for the purpose of promoting thrift, providing credit at reasonable rates and providing other financial services to its members (WOCCU). The members who have accounts in the credit unions are their owners and they

¹³ By 1912, over 400,000 Indians belonged to the credit cooperatives and by 1946 membership exceeded 9 million (Morduch, 2005).

elect the board of directors in a democratic one-person-one-vote system regardless of the amount of money invested in the union. This organizational structure attempts to solve the principal-agent problem by ensuring that the owners and the clients of the institution are the same people. The key decisions about interest rates, the maximum loan size or size of charging fees, are taken democratically by all members.

Credit unions have also their disadvantages against ROSCAs: there is a need of storage of the funds and the bookkeeping and management are more complex and more costly – credit unions need to be able to prosper on financial market. As not-for-profit cooperative institutions, the excess earnings are used to cover costs as well as to offer members more affordable loans, a higher return on savings, lower fees or new services. In 2007, WOCCU’s annual survey of 96 countries identified over 49,000 credit unions serving over 177 million people.

Table 2: Credit Unions Worldwide¹⁴

Credit Unions	
Countries with Credit Unions Movements	96
Number of Credit Unions	49,134
Number of Members	177,383,728
Savings (USD)	987,861,248,617
Loans (USD)	847,896,069,372
Reserves (USD)	115,358,461,838
Assets (USD)	1,181,465,915,013

Source: WOCCU Statistical Report 2007

¹⁴ The World Council does not include data from cooperative banks.

Table 3: Savings Data

Savings						
Distribution of savings accounts (US\$)	0-100	101-300	301-500	501-1,000	1,000+	Total
Number of accounts	995,209	147,397	56,165	46,731	73,713	1,319,215
% of total accounts	75.4	11.2	4.3	3.5	5.6	100

Source: WOCCU Statistical Report 2007

Table 4: Loans Data

Loans				
Distribution of loans (US\$)	0-400	401-1,000	1001 +	Total
Number of loans	117,190	140,223	198,602	456,015
% of total loans	25.70	30.70	43.60	100

Source: WOCCU Statistical Report 2007

We can see that reported credit unions have a large number of small depositors and very mixed distribution of borrower loan sizes in the WOCCU's report¹⁵.

¹⁵ Corresponding tables are in Appendix.

3. The Microfinance Principles

The onset of microcredit/microfinance changed everything. The millions of poor households with lack of collateral seek capital to start their own business and system of MFIs can offer them what they need. In this section, we try to interpret the innovative aspects of the modern microfinance. The system of modern microfinance became a tool, which can reduce risk of loans of both the client and lending institutions and moreover can help the poorest segment of population to live better. But not by donors, subsidies or food aid as some NGOs and help organizations do, but by helping them to improve their lives by themselves. This system increases the access to outside sources of finance. MFIs typically borrow from outside of the locality or region and often outside of the country to fund needs of borrowers. In comparison with ROSCAs or credit unions which work on the basis of local finances/savings.

The group lending with the joint responsibility may not be seen as an innovation coming from microfinance, because ROSCAs used this principle, too, but it is a very important part of this system. This mechanism can reduce risk of default, risk of moral hazard and it can solve the problem of adverse selection. The successful creation of dynamic incentives and additional services and products to those offered credit, have the same importance. The dynamic incentives are created through the long-term relationship between a bank and a client. Under such relationship the clients know that proper repayment of their loans means many advantages, like a bigger loan in future but the default can mean losing the possibility of further cooperation. The frequent small instalments and meetings with public repayments help clients to learn how to “save” regularly, to give them possibility to repay some instalments from their household funds if they are in trouble, to identify potential areas of troubles in advance and so on. Moreover, this has also an advantage for MFIs: a reduced risk of default.

3.1 Group Lending

The group lending principle successfully solves the problem of adverse selection. The clients who already know each other form the groups and logically the safe types want to be with other safe types of people. The potentially risky borrowers have no other

possibility than to form a group together. Then the MFI can price discriminate perfectly by separation of particular groups and thus can offer them the appropriate interest rates. Because of the better insurance against defaults, the average interest rates can be reduced for both types of groups and institutions still make profit. Thus, even when the clients do not know each other perfectly; living in areas with high mobility or long distance from each other; the group lending principle can help them by reducing interest rates.

Group lending can also partially solve the problem of moral hazard. Group members living and working closely together can impose social and/or economical sanctions on each other in case of default. This kind of sanctions is not available for a commercial bank residing far away from the poor in villages. The ex ante moral hazard is mitigated by the members knowing each other, i.e. they themselves know what is the risk of “lying” about initial conditions and plans with the loan. The ex post moral hazard is partially solved by presence of social sanctions from the family and neighbourhood and economic sanctions in the form of no future access to credit.

Other useful feature of group lending, from the MFI’s point of view, is that finance institution transfers the responsibility for its jobs on customers: as screening potential customers, keeping records, finding information, monitoring their efforts and enforcing contracts is all done by its clients.

3.2 System of Instalments

Traditional banks provide the loan to the clients who can use it and after a certain period they are obliged to repay the whole amount of the loan and the added interest amount. Another possibility is to repay loan in some regular instalments, which do not start immediately after the acceptance of the loan and with at least monthly frequency. The model of MFIs is usually different. As soon as the loan is given, the MFIs start to collect instalments on (usually) weekly basis on public meetings just a couple of weeks after the disbursement.

The *frequent meetings* decrease the risk of moral hazard because they can work as an early warning system when any problem occurs. The frequent repayment keeps the probability of default low but also increases transaction costs for both borrowers and

finance institution. It seems to be a reduction of quality of services and imposition of other constraints on clients, but for clients who have a problem to save, the frequent repayment can be beneficial. Before they can spend their earnings (or waste or lose) they have to meet their liabilities.

The principle of *progressive lending* to some extent solves the problem of transaction costs. The institution offers bigger and bigger loans in future with possibility of less frequently paid instalments only to the trusty clients with trouble-free credit history. This reduces transaction costs for both. Moreover, the progressive lending can be seen as some kind of test of borrowers with small loans in order to sort out the worst ones. This system also increases the opportunity costs of non-repayment and thus even more discourages the strategic default.

But why do the banks want the first instalment so soon after the loan is disbursed, before the investment can gain some cash flow, which naturally decreases the effective loan size? It could help select risky clients. The clients have to dispose of some not-from-loan cash flow to be able pay those first instalments. The system of early and frequent repayment is also encouraged by fact that most of small-scale businesses (selling of carpets, food ...) tend to bring revenues on daily or weekly basis. Thus, the system simply checks saving capability of borrowers. On the other hand, the system of frequent instalment payments limits types of projects, which could be financed through microcredit as long-term or seasonal projects needed for agricultural production purposes¹⁶.

3.3 Dynamic Incentives

The strong competition is good. But this is not true for microfinance institutions. If the records, credit history and relevant information about clients are not kept in single database accessible for all institutions, the clients are encouraged to cheat. The easier it is for a client to migrate after the default to another MFI, the higher the risk of default. A similar situation can be seen in urban areas where people are more mobile and catching the defaulters could be more difficult than in a small compact village.

¹⁶ However, GB and also the other MFIs can offer their clients seasonal and long-term loans as well at this time.

The cooperative behaviour among MFIs can help to mitigate this problem. Creation of some *central credit agency* for collecting of data of credit access and history of borrowers and their better sharing can help to make defaulters face the consequences of their obligations. For sure, this process could be uneasy in countries like Bangladesh where no system of social security numbers or national ID numbers exists¹⁷. But in a situation when the alternative ways of financing for the poor are limited, borrowers usually do not want to lose the possibility of future loan in a case of default. Thus, members are usually willing to pay for a fellow member of the group in times of need.

3.4 Female Borrowers

The commercial formal banking sector usually preferred lending to men because men tend to run larger businesses and possess assets and resources important for banks as collateral. At the beginning of microfinance movement, men were favoured by MFIs. However, microfinance sector is totally different from the commercial one. It is aimed on small-scale businesses, small entrepreneurs, self-employment often in the informal part of economy. Most of women living in developing regions still face many barriers restraining them in entrance to economical, social or political life and thus their lives are reduced to their homes. Women have fewer opportunities to borrow, they are less mobile as they are working in or near home, they usually have the responsibility for feeding and educating their children and they are much more sensitive to the social sanctions, such as verbal hostility of co-lenders or neighbours. It is definitely easier to cooperate with women in case of problems with repayment than with men. For these and other factors, women have emerged as better clients for MFIs. Thus, lending to women potentially decreases the risk of ex-post moral hazard and the risk of default, reduces transaction costs as well as other lending costs and increases the repayment rate.

Another positive effect of lending to women is good impact on development of region or country. Since women are more focused on their children's health and education, the more resources they have, the better the lives of their children. The lower fertility rate (from seven to three children on woman on average), lower mortality rate of children and

¹⁷ In Bolivia, regulated financial organizations like BancoSol are required to keep both names and national identification card numbers of delinquent borrowers to the Superintendency of Banks and Financial Institutions. All institutions have access to the report.

lower illiteracy rate can be seen as one of the most important results of received microcredits accompanied with several trainings.

GB started its business by lending more likely to men as well. The fraction of women was in the first years small (from 14 % in 1977 to 46 % in 1983) and sexes were strictly separated. With increasing default rate of male borrowers, GB shifted its focus mainly on women. In 1984, 56 percent of GB's clients were women; from 1990, more than 90 percent of borrowers are women. Last three years the fraction of female borrowers is steadily about 97 percent: from 7,670,203 clients in total; 7,440,096 borrowers were women in 2008. In 2007, worldwide, as mentioned above, 3,552 microfinance institutions reported reaching 154,825,825 clients, when 83.4 percent were female borrowers. The number of female clients has grown from 10.3 million in 1999 to 88.7 million in 2007. That was 764 percent increase through eight-year period.

3.5 Savings in Microfinance

The problem of *lack of collateral* could be partially solved by the principle of group lending. But for many MFIs this system is not enough, the loans are insufficiently secured. For example Indonesian institution BRI requires collateral even from the poorest. The security of loans is not the only reason for requiring collateral. Another logical effect of presence of collateral is the same as in commercial sphere: a decrease of the average default rate and thus reduction of losses for the institution at given interest rate. This allows improving profitability of MFIs without increasing interest rates or fees. Another way to replace a missing collateral and secure loans is collecting clients' savings, namely forced savings.

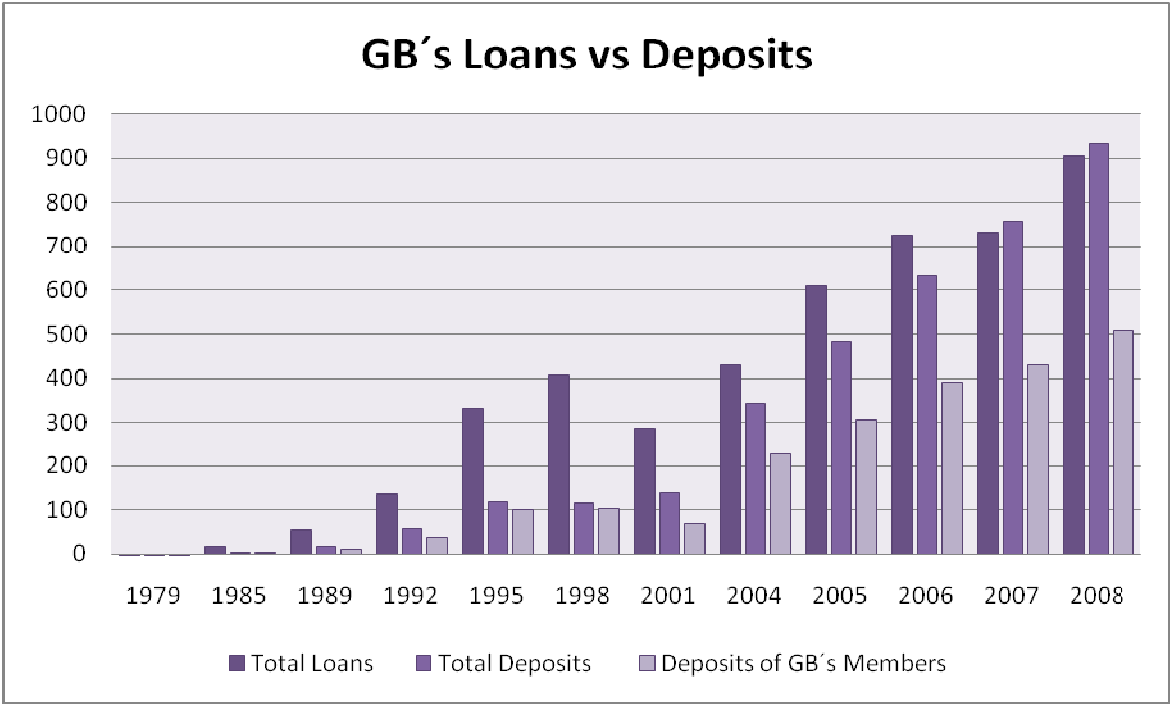
Savings, which MFIs – with proper permission to do it – accumulate, could be divided to two groups: *forced or obligatory savings* and *voluntary savings*. Not all MFIs can collect deposits. Obtaining the state permission which allows collecting money is most difficult, time consuming and moreover quite expensive.

The forced savings make savings an integral part of the microcredit. The clients who obtain loans are forced to keep some part of the amount on the deposit account in the institution at the time when the loan is disbursed. Another type of program of forced

savings demands small regular contribution to the saving account at the time when the instalment is paid. Many of these saving programmes restrict opportunities to withdraw whenever clients like. The withdrawal is allowed for example only after a specific number of months or years with no repayment problems. The customers take this limitation as additional costs of borrowing and it can undermine the confidence in the institution when they cannot use their money at any time.

The system of voluntary savings is another story. This concept is aimed to mobilize the surplus of capital sources of clients, which they do not need to keep liquid. This gives opportunity to the poor to evaluate their money sources. They can learn how to save in small regular amounts to create bigger useful sums of money. With their own built assets they become less dependent on hostile external conditions such as floods, failure of crops or illness of a family member. Moreover, the MFIs receive cheap sources of money for their usage and improvement of services to the customers.

Table 5: Grameen Bank’s Loans and Deposits in Years 1979-2008 (in millions of US\$)



Source: Grameen Bank’s Annual Reports

As we said before every GB’s borrower must have three savings accounts: *Personal Savings Account, Special Savings Account and Pension Deposit Account*, which is obligatory for borrowers borrowing more than Tk 8,000. At the time of disbursement, five

percent of whole loan amount is deducted. The first half of these obligatory savings goes to Personal Savings Account and the second half goes to Special Savings Account. There are no restrictions on withdrawal from personal accounts. The borrower keeps saving weekly to his personal account. But the special account is not withdrawable for the first three years. One withdrawal is usually allowed once in three years with keeping minimal balance of Tk 2,000 or half of the saved amount, whichever is larger. All borrowers with loans bigger than Tk 8,000 need to contribute a minimum of Tk 50 each month in their pension accounts. After ten years the client will receive guaranteed almost double amount put in during the 120 months. The pension accounts are also available for non-borrowers, thus this very attractive offer brings over Tk 100 million (US\$ 1,75 million) of cheap capital source to bank each month.

4. The Birth of Microfinance

4.1 The First MFIs

Irish loan funds active in the period from the 1700s until the 1960s was among the first important microfinance institutions. This idea came originally from *Irish nationalist Jonathan Swift* during the early 1700s when he tried to provide small sums of capital to the poor of Dublin. This system was successfully imitated by many followers and led to the explosion of independent charitably funded organizations for lending to the poor during the first part of the 1800s. These organizations also began to experiment with accepting deposits thus fell under the regulation of the newly created Loan Fund Board in 1837. By 1843, there were around 300 loan funds operating throughout the entire island.

In 1843, the typical fund made 1649 loans and average loan was around £3.3¹⁸. The loans were required by the Irish Poor Law to be no more than £10 and to have a 20-week term, with weekly instalments. The borrowers paid an annualized interest rate about 8.8 percent. The fund could impose a fine when instalments were paid too late. The funds were financed by capital free of interest – it included donations, retained earnings, interest-free loans and deposits, where the interest was paid. The official manager of fund was a volunteer, but daily affairs of fund were mostly controlled by paid clerks. The most of the managers were religious ministers and thus the funds were seen as a form of help or assistance to the poor. Approximately 20 percent of households were borrowers of these loan funds.

¹⁸ Per capita income of the poorer part of population – about two thirds – was little more than £4 (Mokyr, 2006).

Table 6: The Evolution of Microcredit in 1997-2007

End of year	Number of institutions reporting	Total number of clients reached (millions)	Number of “poorest” clients reported (millions)
1997	618	13.5	7.6
1998	925	20.9	12.2
1999	1,065	23.6	13.8
2000	1,567	30.7	19.3
2001	2,186	54.9	26.9
2002	2,572	67.6	41.6
2003	2,931	80.9	54.8
2004	3,164	92.3	66.6
2005	3,133	113.3	81.95
2006	3,316	133	92.9
2007	3,552	154.8	106.6

Source: Microcredit Summit Campaign Report 2009

Borrowers were usually from the low-income rank of Irish society like agricultural labourers, small-scale farmers and tradesmen. The provided loans were used for a wide range of purposes as buying consumer goods in bulk, farm animals and tools or establishing small stores. About 25 percent of borrowers were women.

The period of great famine in the 1840s, caused by repeated failure of the potato crop, which was an essential food in Ireland, had devastating impact on the population and also on the loan funds. The mortality rate reached 13.75 percent for men and 12.34 percent for women; thus about 13 percent for whole population. The rate of emigration was also high, around 12 percent, so the population suddenly declined by approximately one quarter. The famine affected above all people who were borrowers of funds, which led to overdue loans and bad debts. In October 1845, the funds recorded 6 overdue loans from 484 current loans, but after two years, they recorded 205 overdue loans from 241 loans. The funds operating under Loan Fund Board recorded over 2.5 % losses to depositors; significantly large number of (mostly smaller) funds were closed. More than a half (57

percent) of funds could not survive year 1853, but the remaining ones became quickly healthy again and made more loans than before.

Table 7: MFIs Data, by December 31, 2007

Data Point	Finding
Number of MFIs Reporting (1997–2007):	3,552
Number of MFIs Reporting in 2008 Only:	861
Percent Poorest Clients Represented by MFIs Reporting in 2008:	83.4 %
Total Number of Clients (as of 12/31/07):	154,825,825
Total Number of Women (as of 12/31/07):	109,898,894
Total Number of Poorest Clients (as of 12/31/07):	106,584,679
Total Number of Poorest Women (as of 12/31/07):	88,726,893

Source: Microcredit Summit Campaign Report 2009

4.2 The First Important World-Known MFIs

4.2.1 The Grameen Bank

Ninety percent of present microfinance activities take place in Asia. Bangladesh and India are the countries where the microfinance development – as known in the present-day form – begun and spread abroad to neighbouring countries (Bolivia, Indonesia, China) and then to the rest of the world. Big follower is Latin America - especially Mexico. In Africa, the microfinance movement has making first steps, but the number of potential clients is enormous. We can find microfinance organizations also in inner city of Los Angeles or war ravaged Bosnia.

The most famous and important phase of the evolution of microfinance was connected also with great famine as in Ireland, but in Bangladesh the three decades ago – in 1974. Young economist *Professor Muhammad Yunus*, Head of the Rural Economics Program at the University of Chittagong started a project enabling to obtain credits to the rural poor in Bangladesh, suffering from a great famine. During the interview with a poor

woman who made bamboo stools, he found that she had borrowed the equivalent of 15 pennies to buy raw bamboo for each stool from moneylender and after repaying (sometimes at interest rates as high as 10 percent a week!), she earned a penny profit.

Mr. Yunus understood that more favourable loan should help her to accumulate some savings and raise herself above subsistence level. Yunus started lending money from his own pocket to the poor villagers. The impact of the equivalent amount of US\$ 27 divided among 42 (!) villagers was incredible. With this small amount, they were able to repay their previous debts and start their own business, improving their economic situation. This unused potential allowed to Mr. Yunus to start the research project to examine the possibility of establishing the credit system to provide banking services to the rural poor. The Grameen Bank Project came into operation with the following objectives¹⁹:

- extend banking facilities to poor men and women;
- eliminate the exploitation of the poor by money lenders;
- create opportunities for self-employment for the vast multitude of unemployed people in rural Bangladesh;
- bring the disadvantaged, mostly the women from the poorest households, within the fold of an organizational format which they can understand and manage by themselves
- and reverse the age-old vicious circle of "low income, low saving & low investment", into virtuous circle of "low income, injection of credit, investment, more income, more savings, more investment, more income" (History of GB: www.grameen-info.org).

The research program was implemented in Jobra and some other villages in neighbourhood during 1976-1979. By the support of the central bank of Bangladesh and the nationalized commercial banks, the project expanded to Tangail district in 1979 and later to other districts. In October 1983, the Grameen Bank Project was transformed into the independent bank by government legislation under the special law passed for this operation – the Grameen Bank. Now the Grameen Bank is owned by the rural poor to whom it serves. Borrowers own 90 percent of bank's shares and the government owned the remaining part.

¹⁹ The word "grameen" means rural or village in Bangla language.

GB has removed the need of collateral and established new banking system based on mutual confidence and mutual accountability. Credits are obtained to the poorest of the poor kept outside the commercial banking system as not bankable. Professor Muhammad Yunus, the founder of the Grameen Bank and its Managing Director, reasoned that if financial resources can be made available to the poor people on terms and conditions that are appropriate and reasonable, "these millions of small people with their millions of small pursuits can add up to create the biggest development wonder" (Yunus, www.grameen-info.org).

The everyday functioning of GB is quite simple. In the first period of its existence till year 2001, the bank used loan officers who organized rural clients into groups of five persons already known to each other but not living in the same household²⁰. The members were responsible to each other in "both good and bad times". Eight of these groups met every weekend in their village with the loan officers to pay their instalments or solve contingent problems. Two members of each group received their loans as first, after successful repaying instalments after 4-6 weeks other two members received their loan. After other 4-6 weeks, the chairperson of group received the loan. GB used also instrument of forced savings – each member had to make small weekly saving deposits that could not be withdrawn until the termination of his membership. The loan was fixed for one year with weekly instalments. As members repaid their loans successfully, they usually took the new, typically bigger one immediately. After some time, GB introduced new types of loans such as seasonal loans, family loans, housing loans, water-pump loans or telephone ones.

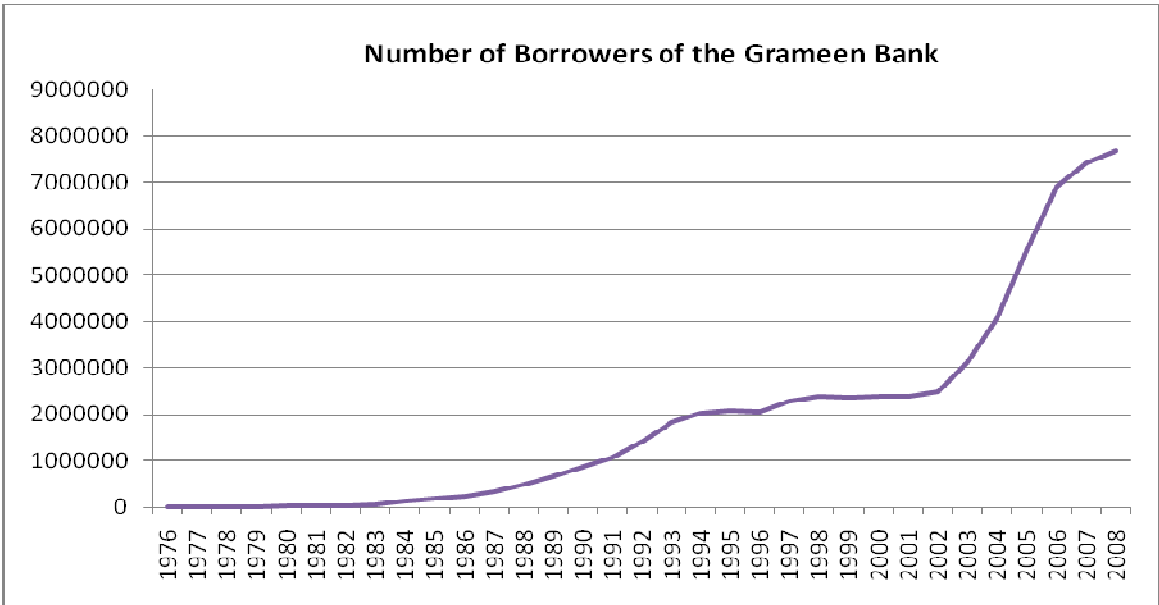
In 1998, Bangladesh was affected by nationwide floods. Damages were huge; many people lost most of their possessions included houses. Many members had already had problems with payment of instalments and after floods many of them gave up repaying their loans. As an answer, GB developed a new system *Grameen Bank II*, introduced in March 2001. The baseline – the formation of groups and the outdoor banking – stayed the same but new services were added and some original services were simplified. Loans do not have to be fixed for only one year anymore, the term can have any duration from 3 to 36 months, and members are not forced to borrow continuously. The repayment is still made in weekly instalments but they are not necessarily equal during the repayment period.

²⁰ In the BancoSol, the groups can be as small as the people can and in the village banking system as FINCA, groups can be in range from ten to fifty members – women.

It allows to members react and fit their repayment structure to suddenly changed living conditions, such as nature disasters, illness, death of a family member or for example only school fees. Another innovation – related to savings services – was the implementation of the bank passbook. The clients can withdraw their deposits, when they need. Now, all the clients have three obligatory saving accounts – *Personal saving account*, *Special saving account* and *Pension deposit account*²¹. Thanks to GB status as a bank, it can accept also deposits from non-members, usually non-poor part of population.

The Grameen Bank’s profit were increasing visibly, from US\$ 0.37 million in 1995, US\$ 1.05 million in 2001, US\$ 15.24 million in 2005 and US\$ 20 million in 2006. But in the last annual report of year 2007, GB reported profit only US\$ 1.56 million. By December 2008, GB has 7.67 million borrowers and 97 percent of whom are women. With 2,539 branches, GB covers all districts of Bangladesh and provides its services in 83,566 villages, which is 99 percent of the total villages in Bangladesh. It seems like a huge number and great success, but the real net profit could be definitely somewhere else when the large part of financial inputs of the GB is subsidized. But still the bank is capable to gain true profit. More about sustainability of GB and other MFIs will be discussed in the following chapters.

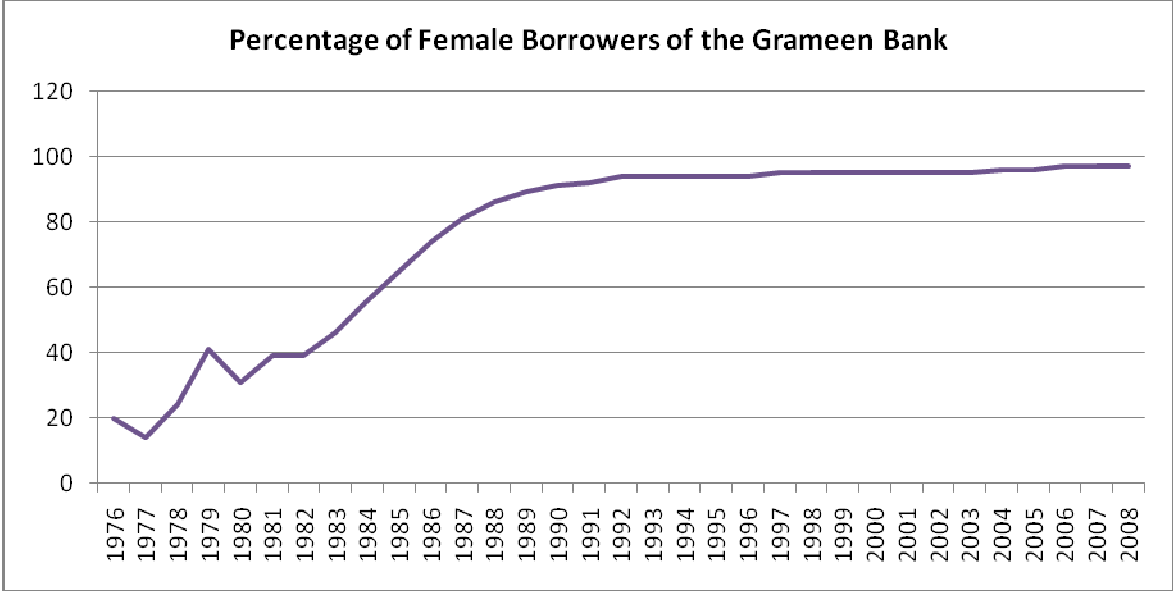
Figure 4: The Number of Borrowers of the Grameen Bank, 1976 - 2008



Source: The Grameen Bank Annual Reports

²¹ The Pension deposit account is obligatory only for borrowers, which borrow above 8,000 taka (US\$ 138).

Figure 5: The Percentage of Female Borrowers of the Grameen Bank, 1976 - 2008



Source: The Grameen Bank Annual Reports

4.2.2 The ACCION International

Another big MFI operating for more than 45 years is *ACCION International* with almost three millions of clients. This organization was established in 1961 in shanty towns of Caracas, Venezuela. Today ACCION is one of the premier MFIs in the world, with a network of lending partners serving to the poor in 22 countries of Latin America, Caribbean region, Africa, Asia and the United States. In the last ten years, ACCION obtained more than 14 million in the sum of 9.4 billion dollars. Over 97 percent of advanced credits were repaid with no complications.

The operation system of ACCION is greatly similar to Grameen Bank’s one. It also operates on the basis of short term small loans to the poor entrepreneurs, outdoor banking, and regular meetings. Clients can borrow either individually or as a group, when they lack the physical collateral or co-signer. The first loans were small as US\$ 100 in Latin America, Africa and Asia and US\$ 500 in United States.

An idealistic student of law Joseph Blatchford founded the ACCION International. As an amateur tennis player on goodwill tennis tour of 30 Latin American cities, he found that the living conditions of people in this region are shocking. Together with his schoolmates, they raised US\$ 90,000 from private companies to start the new type of organization: “a community development effort designed to help the poor help themselves” (History of the ACCION International: www.accion.org). They started with 30 volunteers in Venezuela – building schools and community centres, installing electricity and sewer lines and starting training programs. Over the next ten years, they expanded to other three countries: Brazil, Peru and Colombia.

In 1992, ACCION helped to create the first commercial bank in the world dedicated only to microenterprises – *BancoSol*, Bolivia. In 1991, because of growing income inequality and unemployment in United States, ACCION brought its program there, piloting a program in Brooklyn, New York. After nine years, this branch was renamed to the *ACCION USA*. Together with its licenses make up the ACCION USA created *U.S. ACCION Network* as a largest microfinance network in the country. By the end of year 2006, this network had advanced loan to more than 18,500 low-income entrepreneurs in over 40 cities in amount of more than US\$ 178 million. In 2005, the ACCION started to help in India and in 2007; they expand to Africa, starting in Ghana.

Box 1: Jamii Bora Institution

“I had always believed that there was a lot of talent among those women and I always felt that everybody was neglecting the beggars. We started Jamii Bora with the idea that it would be a small club of beggar women and me, but it soon grew into a large movement of the desperate and neglected. The women started small businesses and some of them climbed quickly into a better life. “

Ingrid Munro, Founder, Jamii Bora

All MFIs also have to select their clients properly as well as commercial banks. Thus, many poor and non-trustworthy individuals as beggars or prostitutes have no access to credit; even the MFI is established in their neighbourhood. Ingrid Munro as a founder of Jamii Bora, located in Kenya, started a new type of MFI. In 1999, Mrs. Munro provided loans to 50 beggars in the Mathari Valley slum in Nairobi. By August 2008, Jamii Bora had grown to 200,000 members. This organization provides loans largely to beggars, prostitutes, thieves and others who would normally be excluded from microfinance system. In addition, staffs consist exclusively of clients and former clients.

In last year’s report, Mrs. Munro described a grand-breaking health insurance program developed in partnership with mission hospitals in Kenya. Their clients pay a total of US\$ 0.30 per week to cover all hospital costs of one adult and four children. After eight years, the health insurance program had 70,000 subscribers covering 350,000 family members and without any donor subsidy.

Jamii Bora has both designed and built its own town - Kaputei town - a revolutionary new community of 2,000 small homes of fifty square meters, space for 3,000 businesses in the city centre and a new school on the land of 300 acres for present inhabitants of slums. Each house consists of two bedrooms, a bathroom, a kitchen and a sitting room and this all for same costs each month as a one-room dwelling in the slums¹. Clients can buy the house from Jamii Bora Trust in a tenants purchase scheme because of the loan from Jamii Bora Kenya Limited, company formed for the microfinance purposes of Jamii Bora. Members will have full ownership of their houses after paying of loan. By early 2003, all the 2,000 homes had been booked.

5. The Sustainability of MFIs

5.1 The Subsidies and Their Forms

To be *sustainable*, MFIs should cover all their expenses with their own revenues. Simply, if revenues are higher than expenses, the MFI is sustainable and can keep operating without a need of subsidies. If revenues are lower than expenses, the MFI needs subsidies in order to cover all its costs. The main sources of revenues for MFIs are interest, fees and commissions on loan portfolio – on average 90 percent of all the financial revenue. The problem with this high dependency on revenue from loans is that increase in expenses can be covered only by increasing of the interest rates, fees or commissions, paid by borrowers, or from other sources (Gonzalez, 2008). Governments and donors have tried to improve social welfare through support of MFIs.

Sustainability is good because it helps MFIs to help more poor people now and also in future. However, achievement of sustainability is also hard process because it requires balancing the outreach and sustainability with prices, which can cover costs, and the poor can still afford them. Sustainability can be defined as the ability to keep performance through the time. Sustainable MFI is permanent but not constant, organization and structure must be flexible and adjustable if there is need. Sustainable organizations meet their goals in present without harming their ability to meet them also in future.

According to Schreiner and Yaron (1999), there are four distinct concepts of organizations' viability: *social worthwhileness*, *subsidy independence*, *private profitability* and *self-sustainability*. A socially worthwhile organization has social benefits prevailing costs in present-value terms. A subsidy independent organization could pay the social opportunity costs of public funds and still show some profit. A privately profitable organization could pay the private opportunity costs of all funds and still show some profit. And self-sustainable organization could meet all its goals now as well in the long term. Social worthwhileness matters because public support for MFIs is aimed on improvement of social welfare. Subsidy independence matters because, if customers benefit from MFIs and if there are no external social costs, then zero social cost implies social worthwhileness. Private profitability matters because, if public funds are limited, then

MFIs will be few and small unless private investors use their own funds to buy MFIs or to start new ones. Finally, self-sustainability matters because society cares about improved welfare both now and in the future. Subsidy independence is necessary and sufficient for private profitability only if the social opportunity cost equals or exceeds the private opportunity cost. Private profitability is needed, however, for self-sustainability. Privately profitable MFIs may improve social welfare more than subsidy dependent MFIs, may also attract private funds and thus produce more development finance at less costs. Private profitability is needed for self-sustainability. Self-sustainability logically requires a host of other non-financial qualities such as organizational strength or efficient technology.

MFIs get subsidies from subsidized funds. *Subsidized funds* are public funds. If MFIs accept public funds then they must cost less than private funds. Subsidized resources are not the same as subsidies. *Subsidized resources* are what donors delegate to microfinance organizations at prices below their opportunity cost. Subsidy is the social opportunity cost of subsidized resources, minus what a microfinance organization pays. All resources from donors are subsidized. Subsidies cannot be negative; a microfinance organization would not hassle with a donor if it could trade on the market at a better price. By definition, only public funds can be subsidized (Schreiner, 2000).

According to Khandker (1995), there are two types of subsidies – *financial* and *economic/social subsidy*. Financial subsidy is the funding of not cost-effective MFI, which is necessary for its survival. The second type occurs when the costs of funding for relending is lower than the opportunity costs of the funds. These two types imply two types of sustainability – financial and economic.

According to Schreiner (2000), MFIs can receive subsidized resources in six forms. Three of them are explicit and three are implicit. The explicit subsidized resources come from donors' transfers and implicit ones from MFI not paying opportunity costs. The first four forms are non-repeatable, they finish when donors leave, and the last two are repeatable. When donors leave, MFIs repay only the amount of debt. Three forms are *equity grants* that increase net worth but do not directly change the accounting profit reported in the corresponding year. The other three forms are *profit grants* that directly increase the accounting profit of the year since they inflate revenues and/or deflate expenses. This increases retained earnings at the end of year and so increases net worth. In comparison with a state of no grants, all these six forms increase net worth one-for-one,

they have the same social opportunity costs. Dividends and taxes on profits are ignored because of simplicity of calculation.

Table 8: Forms of Subsidy

Form of Subsidy	Notation	Type of Grant	Explicit/Implicit	Repeatable/Non-repeatable	Cash/Non-cash
Direct Grant	DG	Equity Grant	Explicit	Non-repeatable	Cash
Paid-in Capital	PC		Implicit	Repeatable	
Revenue Grant	RG	Profit Grant	Explicit	Non-repeatable	
Discount on Public Debt	$A*(m-c)$		Implicit		
Discount on expenses	DX		Explicit		
True Profit	TP	Equity Grant	Implicit	Repeatable	

Source: Schreiner, 2000

The first two forms of equity grants (EG) are the sum of *direct grants* (DG) and *paid-in capital* (PC). DGs are gifts, which increase net worth but do not pass through the income statement and thus do not inflate accounting profit. DGs include both cash gifts and material gifts as computers or trucks, which are reported in the accounts. PC is coming from sales of shares to donors or government, so all PC comes from public sources.

The profit grants (PG) are the third, fourth and fifth forms of subsidized funds. PGs distort accounting profit (P) and thus return on equity (ROE) because they depend on the arbitrary choices made by administrators and accountants. PGs are sum of *revenue grants* (RG), *discount on public debt* $\{A*(m-c)\}$ and *discount on expenses* (DX). RGs are cash gifts, they increase net worth after they pass through the income statement and increase reported accounting profit. Discount on public debt and DXs are non-cash gifts, expenses paid for the benefit of MFI by another person or organization which increase cash held by MFI by decreasing its cash spent. Discount on public debt is the opportunity cost of public debt minus what MFI paid, where A is average public debt, c is the rate paid by MFI and m is the opportunity cost of public debt for society. DXs are costs paid by government or donors that MFI does not report as its expenses as technical assistance, free deposit insurance, coverage of organization costs, debt guarantees, consultant services or travel fees of employees.

The sixth form is non-cash equity grant – *true profit* (TP), accounting profit minus PGs. TP is a change in retained earnings that MFI would obtain in case of no profit grants. Positive TP equals social benefit of donors, which remains disposable and raises the equity of MFI. Symmetrically, negative true profit is a social cost. TP could be more testifying about the real performance of institution than reported profit. Financial accounts of MFIs are usually monitored and completed by certified public accountants, but they do not always follow strictly the international accounting standards. These disaccords can easily change credibility of reported numbers and then also accuracy of all analyses based on these data.

Box 2: Why Forms of Subsidized Resources Matter

The subsidized resources could change a lot when MFI is using them. Schreiner (2000) found at least seven examples why the subsidized resources matter.

Discounts on operating expenses (as technical assistance) can change the production technology by shift of the average-cost curve down. Donors might pay for trainings of loan officers or for managers to attend talks inculcating ideas that the donor wants to promote. Good technical assistance shifts not only the average-cost curve down, but it also makes its (downward part) slope more steeply as the MFI grows.

Cash grants increase funds that MFI can use, as it likes. Growth slides the MFI along its average-cost curve. If all goes well, costs fall.

Buying shares for cash gives donors some control over MFI through seats on its board.

The resources from cash grants can be used to lend more. If there are non-fungibilities, then grants in-kind may not lead to as much additional lending. Grants in-cash may also dampen incentives to find market funds.

Discounts on operating expenses may pay for intangible assets. An example is technical assistance for training loan officers or for organizing management information systems. These intangible assets are not in the accounts, but they fructify over time.

Explicit transfers are more difficult politically than implicit transfers.

MFI might spend cash that comes without strings attached more wisely than they would use resources from in-kind grants with the same worth.

In general, donors should try to give subsidized resources as in-kind grants of technical assistance. If donors must give cash, they should try to do so through the purchase of shares, thus through the formal transfer of ownership. This gives donors more control than do other forms of subsidized resources except technical assistance. Technical assistance can empower MFI with tools, abilities and incentives.

Finally, funds from donors should build microfinance organizations able to survive in the market without funds from donors at the end.

Schreiner, 2000

5.2 The Measures of Sustainability

The MFI is a financial intermediary that aims to improve social welfare and that receives some sources from governments, donors and/or investors. A public MFI may be owned by the state and thus receives public sources as equity or may be owned by private owners (or no owners) and receives public resources as gifts. Analyses of costs are desirable because the group that bears the costs is not the same group, which gets the benefits. Two main groups, which are contributing to this demand, are social investors, who are looking for assurance that their investments are flowing to the properly operating MFI, and MFIs themselves. The measurement of sustainability can help to donors in at least five ways (Schreiner, 2000). Proper measurement forces the explicit definition of goals of organization and can help to adjust them. The measurement can expose priorities, when organization is willing to measure sustainability it is also willing to do something toward improvement. Also, the results can help to management to detect trends, to set targets or to make benchmarks for comparison with peers. Finally, the measurement can improve what microfinance does, by requirement of sustainability from donors and investors.

The usage of common financial ratios as ROE, Return on assets (ROA), interest margin or non-performing loans ratio based on data from MFIs' annual reports may hide

the true performance of MFIs. The measure of costs may not reflect the existence of social opportunity costs and may be heavily affected by the amount of received subsidies. In response to this increasing demand, MFIs and many other organizations are examining processes and tools, including *social indicators*, to measure effectiveness of MFIs' social mission together with reached sustainability. Social indicators can cover a wide range of areas, from internal processes at the institutional level (social goals of MFI, values of social responsibility, the range of financial and non-financial services, staff incentives, methods of market feedback and so on) to indicators that investigate the program's output as clients crossed the poverty line after the entering the program. The indicators should not be too difficult to collect data, should be practical to use and useful for both MFIs and other users.

The benefits of MFIs are the extra welfare of clients with access to program versus those without access. The analysis should be done as a comparison of groups with and without access to program rather than before-and-after analysis. Before-and-after comparison does not count the changes of welfare caused by elements not corresponding with MFI's program. The question to answer is what would have happened to the poor without the MFIs. This analysis requires *control group* – group of people who cannot choose to use the MFI but who are just alike the people who can choose to use it in all parameters (Schreiner and Yaron, 1999). To get the control group usually requires random assignment to access to MFI, but such kind of experiment consumes large amount of funds, time and experts and volunteers. There is no other inexpensive way to measure the impact of MFI without control group. More about impact of MFIs will be discussed in next chapters, now let us turn back to problem of measurement of subsidy-dependency (or sustainability) of MFIs.

Just as accounting profit and ROE do not tell owners whether firms create or destroy private wealth, these common measures cannot tell the society whether MFIs create or destroy social welfare. The sustainability is sufficient but not necessary condition for worthwhileness and profits are necessary but not sufficient for sustainability. Thus, there is no necessary need of existence of relation between profits and worthwhileness. The reason is that profits of sustainable MFI can attract private investors who can fund more and bigger MFIs than public donors ever could (Schreiner, 2000). The measuring worthwhileness requires *cost-benefit analysis* (CBA) which logically requires measurement of both costs and benefits of program. The sustainable organization can be

also called worthwhile even without CBA because social costs (in financial sense) are zero. The measurement of costs is much simpler and less expensive than the measurement of benefits. Measuring benefits requires many good data and comparison of similar groups of users and non-users (written before). Inexpensive analysis with useful conclusions is *cost-effectiveness analysis* (CEA). This analysis asks how high the surplus of MFI's users would have to be to make social benefits bigger than social costs. The comparison can be done either from the past to the present or as prediction to the future.

5.3 SDI and Other Measures

5.3.1 Computation of SDI

The most useful measurement of self-sustainability of MFIs was developed by Yaron (1992), a finance specialist of the World Bank, and it is called *Subsidy Dependence Index (SDI)*. This framework is widely accepted by practitioners as well as academics as an instrument for the good assessment of performance of MFIs, rural banks and other institutions of public interest. If the opportunity costs are defined from the point of view of society, not of the MFI, and if the past social costs are sunk, then the measurement of subsidy in the framework of the Yaron's SDI measures social costs in the given period. The measurement of just social costs is less expensive alternative to measurement of both benefits and costs. Social costs are defined as opportunity costs to society of the public funds used by MFI less what the MFI could pay back to society and still break even in a given time period. MFI with no social costs is subsidy independent.

Although the removal of subsidies is not always politically possible and/or economically desirable, the measurement of level of subsidy-dependence is always wantable in both ways because it could lead to a better allocation of sources. Computing SDI could serve to governments, enlighten donors and management of MFIs that are trying to lower subsidy dependence or effectively use subsidies. It allows comparing subsidies with other development interventions.

The SDI illustrates the percentage of increase that is needed in the annual yield on the outstanding loan portfolio as a percentage of the current yield achieved, if full subsidy independence was to be reached instantly. This illustration assumes that an increase in the

lending interest rate would generate the subsidy elimination. However, it is clear that any type of cost saving would automatically be reflected as an increase in annual profit or as a reduction in annual loss. Therefore, that cost saving would inevitably lower the SDI (Francisco, Mascaró, Carlos Mendoza and Yaron, 2008). The SDI can be computed for any period (for month or decade). However, practical experience shows that analysis on annual basis is the most practical because also audited financial statements and budget are prepared on annual basis. The SDI itself cannot clarify how the subsidies were used or whether most benefits were accrued to the clients or were consumed by bureaucratic process. The advantage of SDI is its simplicity that it focuses exclusively on the inflow of subsidies and does not depend on the specific form in which the subsidy is received, dollar treated as profit grant has the same effect on business performance of MFI as dollar treated as equity grant.

Yaron (1992) defines the numerator of the SDI as subsidy S:

$$S = m.E + A.(m - c) + K - P$$

where S is subsidy received in given period, m is social opportunity cost – interest rate which MFI would be supposed to pay for borrowed funds without subsidies, E is average equity, A is average public debt, c is interest rate paid for public debt, K is sum of other subsidies (as revenue grants and discounts on expenses) received in given period and P is accounting profit before tax.

The amount of subsidy S can be the sum of the social opportunity cost of the net worth of MFI and of three forms of profit grants. The SDI tries to answer what is the extent of the increase of the lending interest rates necessary for MFI to operate with no subsidies. Thus, the solution of following equation is the *zero subsidy interest rate* i^* - the level of interest rate, which allows repaying the whole amount of subsidies:

$$OLP(1 + i^*) + I = OLP + C + m.E + A.(m - c) + K$$

where additional acronyms mean: OLP is amount of outstanding loan portfolio, I is total investment income and C is sum of costs (including cost of capital). The left side of second equation shows expected income and the right side gives costs. After extracting the zero subsidy interest rate, we have:

$$i^* = \frac{C + m.E + A.(m - c) + K - I}{OLP}$$

For the comparison ability, the necessary increase of the current interest rate i is given as a percentage change, which gives:

$$\frac{i^* - i}{i} = \frac{C + m.E + A.(m - c) + K - I - OLP.i}{OLP.i}$$

Thus, the SDI could be expressed as:

$$SDI = \frac{m.E + A.(m - c) + K - P}{OLP.i} = \frac{S}{OLP.i}$$

where S is subsidy received in given period, OLP is outstanding loan portfolio and i is average yield earned on the loan portfolio.

5.3.2 Interpretation of SDI

The SDI is the change in lending revenue that, *ceteris paribus*, would make the MFIs independent on subsidies and be profitable. In other words, the SDI is the percentage change in the yield of lending that, *ceteris paribus*, would make subsidy zero. Thus, the SDI of 1.00 (or 100 percent) technically indicates that the doubling (increase of 100 %) of the average lending interest rate is required when all subsidies are eliminated, and it makes the SDI zero. The SDI of zero means that MFI has achieved full subsidy-independence. A negative value of SDI indicates not only that organization has fully achieved subsidy-independence but also that its annual accounting profit less its subsidized equity, charged at the approximate market interest rate, exceeded the total annual value of subsidies (including social opportunity costs). That means that MFI could compensate society for its opportunity costs and still break even. Thus, negative SDI is necessary, but not sufficient, for sustainability.

Subsidies could be effectively reduced or even eliminated or services could be provided at lower costs for poor clients. The SDI analysis can be more predicative by analyzing the drivers of the profit term in calculation. Two main drivers of particular interest in MFIs are net loan losses and transaction costs. Successful organization keeps its annual losses in the range of 2-5 percent of average annual OLP. However, this success is in many cases achieved by using specialized lending technologies (many small loans...)

that lead to transaction costs significantly above those of regular commercial banks. In many MFIs, the value of transaction costs measured against the OLP exceeds 30 percent and reaches a somewhat lower figure when measured against total assets (Francisco, Mascaró, Carlos Mendoza and Yaron, 2008).

According to Yaron and Schreiner (1999), the SDI has thirteen strengths and at least two limitations. Let us have a look on some strengths of SDI measurement:

- It quantifies subsidy and shows the extent of subsidy dependence, enable comparison with other uses of public funds.
- It compares subsidy with revenue of lending and can be used through time.
- Negative SDI implies SAROE higher than the social opportunity costs.
- It shifts focus from accounting costs on opportunity costs, because accounting costs are often distorted by subsidies.
- It highlights possibility of covering costs with revenue of lending.
- Although, SDI cannot measure benefits, it can measure costs, which is cheaper.
- The SDI is a simple widely known and used measure.
- The SDI can detect weaknesses in the accounting system.
- It can help in the analysis of the sources and uses of subsidy and improvement of subsidy-dependence through time.

The SDI has at least two known limitations. The SDI answers an important question whether MFIs could compensate the society for the opportunity costs of its funds and still show profit. But it does not answer some other important questions. The SDI does not discount flows of funds. In short periods, this is not a material issue. In long periods, however, measures of social costs must be based explicitly on a framework that discounts flows of funds (Schreiner, 1999; citing Schreiner, 1997). Like private investors who buy shares in firms, government and donors must judge MFIs not only in their first year, in their most recent year, or in the next year, but also through their whole lifetimes and into the future. Another problem is that SDI indicates subsidy independence but not self-

sustainability²². Subsidy-independence may not guarantee self-sustainability, subsidy-independent MFI still can fail to meet its goals in the long term.

Yaron and Schreiner included among strengths also that SDI is a ratio of subsidy and revenue of lending. Why is subsidy compared just with revenue of lending? The authors also gave us couple of reasons supported SDI in this manner. First, the interest rates of MFIs are often set by governments or donors with some range of possible change. When public funds are cut in the long term, the chances of survival increase as MFI can cover more of their costs of private funds by revenues of lending. The revenue of lending is the biggest item in the income statement of MFIs and usually exceeds all other sources of operational income combined. Many MFIs cannot reduce their expenses or simply increase their non-loan income to compensate subsidies and thus the increase of price of loans could be the best solution (at least in the short term)²³.

5.3.3 Other Measurements of Subsidy-dependence

The SDI is the most common way to measure the importance of public support for *development finance institutions* (DFI). But in this section we review recent attempts to adjust the SDI: the *subsidy-adjusted ROE* (SAROE) or the *subsidy-adjusted ROA* (SAROA), the *Subsidy Dependence Ratio* (SDR) proposed by Khandeker, Khalily and Khan²⁴; the *Profitability Gap* (PG) of Sacay²⁵; the *average SDI* of Hulme and Mosley²⁶; the *Net Present Cost to Society* (NPC_S) by Schreiner and the *Output Index* by Francisco Mascaró, Carlos Mendoza and Yaron (2008).

We will start with the first two indicators. These two indicators are useful for a comparison of a MFI with another one. The SDI and SAROE are closely related and its useful usage coming from commonly known measure of financial performance of private firms – ROE. Where, ROE compares the accounting profit with the average equity; the

²² A subsidy-independent organization could pay the social opportunity cost of its funds and still show a profit; a self-sustainable organization can meet its goals now and also in the long term (Yaron and Schreiner, 1999).

²³ Subsidy can be compared with anything in unit of dollars per unit of time. Other good candidates for comparing could be average equity or average assets.

²⁴ Khandker Shahidur R., Zahed Khan, and Baqui Khalily, “Sustainability of a Government Targeted Credit Program: Evidence From Bangladesh”, Discussion Paper No. 316, Washington D.C.: World Bank, 1995

²⁵ Sacay Orlando, “Measuring Subsidy and Sustainability of Microfinance Institutions”, manuscript, World Bank, 1996

²⁶ Hulme David, and Paul Mosley, *Finance Against Poverty*, Volumes I and II, London: Routledge, 1996, ISBN 0-415-09544-1 and 0-415-12430-1

accounting profit depends on whether gifts or donations are treated as the equity grant or the profit grant; but SAROE compares rather the true profit with the average equity. SAROA compares the true profit with average assets. The SDI is equivalent to SAROE since the SDI is negative if and only if SAROE exceeds the social opportunity cost - m .

Both the SDR and the SDI have subsidy S in the numerator. As SDI, the SDR is negative if and only if SAROE exceeds the social opportunity cost. The SDI and SDR differ only in what they compare with subsidy. The SDR answers the question: how much more revenue of lending and investments would be needed to reach subsidy independence? The SDR ignores the mission of MFIs and ignores that MFIs are usually price-takers on non-loan investments (Schreiner and Yaron, 1999 SDI). The numerator of the SDI is just revenue from loans, while the denominator of SDR is revenue from loans and from investment. Thus, the SDR is always less than or equal to the SDI and so MFI appears to be closer to subsidy-independence than actually is. The SDR can show decreased subsidy-dependence though MFI uses more public funds to maintain the same number of loans and value of loan portfolio. This measurement cannot help to choose better ways how to allocate public funds to improve welfare of the poor.

Sacay bases his concept of PG on four unfounded concerns. First, the SDI is already equivalent to SAROE. Second, most DFIs meet legal capital requirements. For those who do not, the PG counts some subsidies twice. Third, both the SDI and the PG are sensitive to rate on public debt - c . Fourth, the SDI does not claim that only way to remove subsidy is to increase the yield on lending. The PG tries to answer question: how far from a target SAROE is DFI that gets subsidies from an exemption from legal capital standards? Again as SDI, the PG is negative if and only if SAROE exceeds the opportunity cost. After some corrections, we can discover that PG is equivalent to SAROE and thus do not provide any new thing in the context of SDI (Schreiner and Yaron, February, 1999).

The other attempt to improve SDI is the average SDIs computed by Hulme and Mosley. This computation has at least two complications. Their formula for the average SDI destroys its interpretation as the percentage increase in revenue that would make subsidy zero and the formula used for the one-year SDI does not seem meaningful. When SDI is ratio, they computed the average SDI as the average of ratios. Thus, the formula of their average SDI has unknown interpretation since it muddles the formula for subsidy-dependence and they use the average of ratios instead of the ratio of averages (Schreiner and Yaron, February, 1999).

Therefore, we saw that three last mentioned proposals do not improve the SDI as measure of social cost or/and subsidy-dependence. Moreover, they are less useful than SDI.

Next to the last measure is NPC_S of Schreiner. Like common present-value measures the NPC_S discounts cash flows according to when they take place in time, thus it works in any time frame. The NPC_S answer this question: what benefits did society lose because it entrusted public funds to DFI rather elsewhere? Both SDI and NPC_S are based on social opportunity costs. Only NPC_S discounts flows, but discounting matters more and more as time frame lengthens. The NPC_S complements SDI – the NPC_S is negative if the worth of the inflows to society exceeds the worth of the outflows. Therefore, MFI with negative NPC_S seen from now on is a good social investment from now on. But users of the NPC_S should know couple of important facts about this indicator. The NPC_S is not just sum of SDIs through time. Negative NPC_S seen from now on does not imply negative NPC_S as seen from birth. The NPC_S ignores benefits and costs of non-customers. The SDI assumes that true profit comes in the middle of the year, while NPC_S assumes that TP comes at the end of the year.

Both the SDI and NPC_S work well in short time frames. But in a long time frame, the NPC_S is recognized as the best tool to judge projects. So, why is SDI still important? The SDI is slightly easier to compute than one-year NPC_S . The extra accuracy due to the discounting in the one-year NPC_S may be dwarfed by the inaccuracies of the basic data and by assumptions used by both the SDI and the NPC_S in the attempt to fit data based on GAAP accounting into economic framework. And as mentioned above, the equivalency of SDI and SAROE is useful when the ROE is commonly used measure (Schreiner and Yaron, 1999).

The last mentioned measure was Output Index by Francisco, Mascaró, Carlos Mendoza and Yaron (2008). The newly developed OI can be used to measure the level of achievement of the DFI's social goals. It is flexible indicator that captures level of DFI's outreach with respect to designated target group. In the related paper, the OI is used to measure outreach in terms of loans extended to various income Gross. They assumed that government's social objectives assign a higher social value to lending to the lower income group. But it is easy to adapt it to measure different social policy objectives as amount of female client and so on. The corresponding "discount factor" Z exists, which is the ratio of the non-weighted OI to the weighted OI. This factor says whether the DFI is behaving

according to government's objectives, for example lending to the lower-income part of population. When Z is greater than one, then the DFI lends proportionally more to higher-income groups. If Z is below one, the DFI is lending proportionally more to low-income groups, which is in accord with the government's social objectives. Z serves as discount factor for the subsidy because if Z is below one, the cost of each dollar given as a subsidy costs less because it reaches more of the target clientele.

5.3.4 The Recent Findings

In this subchapter, we would like to mention recent findings on the field of subsidy-dependence measurement. We would like just to sum up findings from the studies of Francisco, Mascaró, Carlos Mendoza and Yaron (2008) and Tesař (2008). The first study is focused just on two DFIs – *Banadesa* (Honduras) and *Banrural S.A.* (Guatemala). They computed and commented the explanatory power of the one-year SDI result and their newly developed indicator OI.

The Banadesa is a Honduran state agricultural development bank. It has approximately US\$ 50 million in assets, one of the five smallest ones in a total of 80 DFIs identified in the region of Latin America & the Caribbean. This development bank finances all agricultural activities, focusing on small and medium producers. Its key activities financed include the growing of grains, coffee, sugar cane, cotton and fruits, a few agro-industrial and rural services activities and cattle raising. Banadesa has a deficient financial reporting system, which leads to inaccurate financial statements, and the data had to be adjusted. They had to estimate data for consolidation of Banadesa's Own Funds and Trust Funds to compute SDI. The calculated SDI (year 2002) just for Own Funds of 11 percent indicates that Banadesa would have to increase the yield it obtains on its OLP from Own Funds by that degree (from 46 to 51 percent) to become subsidy independent. After adjustments on loan loss provisions, the adjusted SDI increases to 23 percent, thus Banadesa would have to increase the yield on the OLP from 46 to 57 percent. For the consolidated accounts, the SDI is 34 percent or after annual loan loss provisions' adjustments the SDI is 42 percent, that means Banadesa would have to increase the yield from 26 to 37 percent to become subsidy independent. The weighted OI stands at 0.26 with corresponding "discount factor" Z of 1.27. Since Z is greater than one, after adjusting for

the government's priorities, Banadesa is lending comparatively less to low-income individuals than the amount desired by the government's objective is.

The Banrural S.A. was founded in 1998 in Guatemala as a result of transformation of its predecessor, Banadesa. Banrural S.A. offers lending products including microfinance loans, agricultural loans, housing loans, consumer loans, infrastructure loans and corporate loans. According to audited financial statements of 2004, the SDI was – 11.47 percent. Thus Banrural S.A. has not only achieved self-sustainability, but also its annual profit less its opportunity cost of own capital and subsidies received, exceeded the total annual value of subsidies. Banrural S.A. could reduce its average lending rate from 17 to 15.2 percent and still could achieve adequate profitability (as SDI of zero). The Z factor of Banrural S.A. differs according to its different products offered. For microfinance and agriculture lending the Z was less than one, thus in year 2004 Banrural S.A. achieved its social development objectives by lending more to low-income groups. But for housing and consumer loans, the Z was above one and Banrural S.A. has not adequately channelled loans to the targeted low-income part of population.

The second study is focused on six MFIs in Asia and the SDIs are calculated for, in average, period of eight consecutive years. I chose to state here only the interesting cases. The results of famous Grameen Bank are keeping below 0.77 for the whole period. In 2003, two years after the introduction of Grameen Bank II, the SDI was at the first time under 0.50 and kept decreasing because of growing revenues from lending connected with slowly decreasing amount of subsidies. The GB closed the observed period with SDI equal to 0.11. The mobilization of savings also from non-poor allowed to fund much of bank's loan portfolio from deposits and to stop accepting grants and soft loans from donors²⁷. For the assurance that decreasing SDI is not recovered by decreasing depth of outreach, Tesař also investigated the average loan balance per borrower. This shows decreasing trend in time. Thus, even the GB is providing its services to customers bellow the poverty line, it is getting closer to the point where it can show not only accounting but also true profit (Tesař, 2008).

Other three cases are examples of MFI showing successfully decreasing SDI in time, MFI showing stagnation in terms of SDI and MFI showing high volatility of SDI. The first case is *Nirdhan Utthan Bank Limited*, Nepal (NUBL). When Dr. Harihar Dev

²⁷ Public debt of GB decreased from US\$ 180 million in 2001 to less than US\$ 30 million in 2006.

Pant visited GB in Bangladesh in 1986, he was excited and he launched microfinance program in Nepal starting in January 1991 – Nirdhan NGO. In July 1999, the NUBL was established. On the beginning of the observed period, the dependence of Nirdhan NGO on subsidized funds was very high (SDI around 3.5), the total amount of subsidies equals one-half of the total size of the loan portfolio. This is mainly a consequence of the necessary start up costs in the early phase of its existence. The situation changed when NUBL was established in 1999. The main driver of reduction of SDI was growth of the interest income as result of increasing size of the gross loan portfolio. The dependence on subsidies falls progressively to end up on the SDI of circa 0.3 in 2006. If we check the average loan balance per borrower, the increasing trend is still not against the proclaimed mission to help the very poor.

Table 9: The SDI Results for Six Asian MFIs, 1997-2006²⁸

MFI/year	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
GB	0.77	0.61	0.55	0.67	0.58	0.55	0.40	0.24	0.12	0.11
HKL	–	–	1.42	1.50	1.30	0.96	0.90	0.66	0.53	0.51
S	–	0.71	0.56	0.73	0.41	0.59	0.57	0.59	0.35	0.53
NUBL²⁹		3.51	3.36	1.08	1.01	0.70	0.79	0.55	0.61	0.33
BURO	3.26	1.87	0.65	0.80	0.38	0.26	0.70	0.68	0.35	0.26
CEP	–	–	0.49	0.11	0.58	0.38	0.28	0.45	0.50	0.15

Source: Tesar (2008)

The example of MFI showing stagnation in development of SDI is *Seilanithih*, Cambodia. This institution, operating smaller scale in Cambodia, was established in 1996 by the merger of three Cambodian projects of Care, international NGO. The main donor of Seilanithih became Agence Française de Développement. As we see in Table 9, the evolution of the SDI does not show a significantly positive pattern. At first, there is a tendency of the subsidy-dependence to decrease, however in an oscillating way. Since

²⁸ GB = Grameen Bank (Bangladesh), HKL = Hattha Kaksekar Limited (Cambodia), S = Seilanithih (Cambodia), NUBL = Nirdhan Utthan Bank Limited (Nepal), BURO = Bangladesh Unemployed Rehabilitation Organization (Bangladesh), CEP = Capitality Aid Fund for Employment of the Poor (Vietnam).

²⁹ The data are calculated for period from the second half of 1997 to the first half of 2006. Year is taken as 12 months from July to June of next year.

2002 until 2004, there was stagnation of the SDI around 0.6, in 2005 the SDI fell down but year after it increased again to 0.53.

The last example is *Capital Aid Fund for Employment of the Poor*, Vietnam (CEP) founded by Ho Chi Minh City Labour Confederation in 1991 to create employment and income-generating opportunities for poor families through the provision of credit. This non-profit fund has been successfully expanding in Ho Chi Minh City to all 22 districts of city. As of June 2007, CEP had outstanding portfolio of US\$ 10.7 million and 68,490 active borrowers, 17 branches and outstanding savings balance of US\$ 3.7 million. The level of subsidies is relatively low at the beginning of the period, mainly in 2000 when the SDI decreased to 0.11. But this was only a temporary result, right in next year the SDI jumped to its maximum of observed period. This high volatility pointing at low regularity of financial inflow continues throughout all the analyzed years. Such a high volatility of donors' support is not a good signal for the poor clients that necessitate mainly continuity of financial assistance.

6. The Impact of MFIs

6.1 The Measuring of Impact

The huge development in the field of microfinance was noticed in the recent years. In several countries, the competition among MFIs has increased rapidly. In addition, the commercial banks have started to be interested in providing microfinance; because the microfinance could be successful and profitable business. In some countries, the commercial banks are even stimulated by their governments to involve in lending to the poor³⁰. Moreover, the commercial banks and investors, especially from developed part of the world, have become interested in financing MFIs and thus helping the poor. The large banks as Citigroup, Deutsche Bank and HSBC have made special microfinance divisions for supporting selected MFIs. The interest of multinational banks is due to the so-called “double bottom line” of financing and supporting MFIs. It enables to investors to gain attractive returns with comparatively low risks and at the same time show their corporate *social responsibility*. We have mentioned above the increasing competition can bring deterioration of microfinance system but can also bring some improvements as lower interest rates, lower costs, more efficiency and the introduction of new financial services, such as saving accounts or insurance services. This pressure of increased international interest in microfinance has raised the need for studies of MFIs’ sustainability together with their impact on society. The sustainability and efficiency of MFIs have increased also thanks to access to the recent developments as new banking technologies such as charge cards, ATMs, the use of cell phones and the internet, which is reducing the transaction costs. The liberalization and better regulation of financial markets in some developing countries also have contributed to improvement of sustainability and efficiency of MFIs. In the light of this recent development, there is a need to proof that increased sustainability or subsidy-independence is not at the expense of initial objectives to reduce the poverty, at the cost of their outreach.

The measuring of impact of MFIs is not easy-to-solve problem. There is a need of comparison of groups with access and without access to microfinance – comparison of benefits and costs of joining the MFI. The benefits of MFIs are the extra welfare of clients

³⁰ K-REP, Kenya, is example of one commercial bank involved in lending to the poor.

with the access to MFI versus those without such access. The comparison is not before-and-after but rather with-and-without. The before-and-after comparison does not control for the changes in welfare that would have happened regardless of access to the MFI (Schreiner and Yaron, 1999). In addition, simple comparison of users and non-users may overestimate the impact of MFI. The changes of the social and/or economic situation of the client may not be the result of microfinance. The relatively rich people are less risky than relatively poor agents, thus it may induce that relatively rich agents applied for microcredit whereas poor agents did not. Therefore, in this case, the ex-post comparison of income of the two groups may lead to the incorrect conclusion. Moreover, in order to increase the probability of microfinance being successful, the MFI itself may decide to develop its activities in relatively more wealthy regions. Logically, this biases any comparison between users and non-users (Hermes and Lensink, 2007).

Table 10: The Possible Problems of Comparison Studies

The Possible Problems with Studies Comparing Clients to Non-clients		
<i>Qualification bias</i>	<i>Participation bias</i>	<i>Location bias</i>
Difference between clients and non-clients can be function of the microfinance program’s own criteria: accepted clients may be more capable to begin with than those who are not accepted	The less qualification bias there is, the more the difference between groups can be attributed to <i>choice</i> . It may be that those who choose to participate have characteristics such as optimism, motivation and existing opportunities leading to higher income regardless of the impact of the program.	Comparison between two geographical areas – with and without program – can raise the question how comparable these two areas are.
The Possible Problems with Studies Comparing New Clients to Mature Clients		
<i>Survivor bias</i>	<i>“Wait-and-see” bias</i>	<i>Bias caused by changes in program characteristics</i>
Mature clients can represent only those who are financially successful enough to continue paying, while new clients may include future dropouts	Some clients may choose to join only after it has established a track record, while others are willing to sign up immediately – comparison of two different groups (different risk aversion...).	MFIs can change their location, target clients or evaluate borrowers – this could lead to qualification bias and location bias.

Source: GiveWell

Thus, the idea is to find a *comparison (control) group* consisting of people who are just like the program members (age, education, living conditions, ...) except for the effect of the program – but this is a very difficult, expensive and time-consuming process. For

example, the control group can be made by choosing non-clients who were eligible for the program but did not join or non-clients who would have been eligible but were from similar village where there is no MFI. The more rigorous studies compare the average performance of clients to the comparison group on several independent variables (those not affected by the program as age and gender) or baseline characteristics (when the client entered the program; as income, occupation, number of children) to verify that the two groups indeed seem very much alike. Still, there may remain the “unobservables” – characteristics that are difficult or impossible to measure³¹. The problem of dissimilar comparison groups is known as selection bias and it is limitation of most social science researches and impact studies. Practical but not perfect solution to selection bias is to compare the existing clients with the newly incoming clients. Both groups have chosen to join the same program, so there is no fear of non-similar existing observables. However, this brings the mentioned questions again³². The only way to ensure the absence of selection bias is through experimental design: random assignment if treatment and control groups (Goldberg, 2005).

Thus, we saw that creation of comparison groups is a very difficult task. But also the comparison of costs and benefits itself is difficult and moreover very expensive. In many cases, the measurement of costs but not benefits is best use of resources than the measurement of both costs and benefits. This is the main advantage of *cost-effective analysis* (CEA). Whereas *cost-benefit analysis* (CBA) compares costs with expensive-to-measure benefits, CEA compares costs with inexpensive-to-measure outputs. But obviously, the CEA is not as useful as full-blown CBA. The CEA cannot rank the projects that do not produce the same outputs for the same customers. The CEA also is not able to tell whether benefits exceeded costs (Schreiner and Yaron, 1999). The measurement of costs detects strong or bad performance and helps to evaluate the achievement of company’s objectives. The question, which the CEA answers, is: How high would the surplus of the users of MFI have to be to make social benefits exceeded social costs? According to Schreiner and Yaron (1999), the CEA is inexpensive in comparison to the CBA for three reasons:

³¹ There are many questions why non-users did not become users: Why, exactly, did not clients join the program? Were they afraid they could not repay the loan? Why, exactly, is there no MFI in that particular village - is it too far from the main road? Are the villagers too well off...or too poor?

³² Why, exactly, did not this new group of clients join the program several years ago - was it because they were afraid or because the MFI was until now avoiding their village, either because it was too poor or too rich to it?

- It is inexpensive to measure social costs in the framework of the SDI.
- It is inexpensive to measure the average dollar-years of debt or of deposits produced by a MFI.
- The average social benefit of the average borrower or depositor is a multiple of the average or deposit outstanding. Thus, the analysis need not incur the high expenses of measuring benefits.

Box 3: How the Grameen Bank Monitors Its Impact

The Grameen Bank has its own system of measurement of its impact on clients. The GB awards its branches up to five stars for their performance. Three stars are related to financial performance – profitability, saving mobilization, and portfolio quality and two stars are awarded on social impact measures – whether all school-age children of Grameen borrowers are in school and whether all Grameen families have left poverty. The GB developed ten easily observable indicators that, when all are met, strongly suggest that a family has escaped poverty. These indicators are as follows:

- The family lives in a house worth at least Tk 25,000 or a house with a tin roof, and each member of the family is able to sleep on a bed instead of the floor.
- The family members drink pure water of arsenic free tube-wells, boiled water or purified water.
- All children in the family over six years of age are all going to school or have finished primary school.
- The minimum weekly loan instalment of the borrower is Tk 200 or more.
- The family uses a sanitary latrine.
- The family members have adequate clothing for every day use, warm clothing for winter, and mosquito nets to protect themselves from mosquitoes.
- The family has sources of additional income, such as vegetable garden, fruit-bearing trees, etc., so that they are able to fall back on these sources of income when they need additional money.

- The borrower maintains an average annual balance of Tk 5,000 in her savings accounts.
- No member of the family goes hungry any time of the year.
- The family can take care of its health. If any member of the family falls ill, the family can afford to take all necessary steps to seek adequate healthcare.

Source: Goldberg, 2005

6.2 The Studies of Impact

6.2.1 The Wider Effects

In this subsection, we discussed the results of some studies aimed on the impact of MFIs. The wider effects of microfinance include, for example, change in women's empowerment, use of contraceptives, knowledge of better nutrition, education and/or change in wages. Some of those outcomes, especially those intangible (e.g. empowerment) can be difficult to measure and this complicates the estimation of impact.

Hashemi, Schuler and Riley in their study "*Rural Credit Programs and Women's Empowerment in Bangladesh*" (1996) showed that participation in MFIs have positive effect on empowerment of their clients. They used measure of the length of program participation among GB and BRAC clients to show that each year of membership increased the likelihood of a female client being empowered by 16 percent. They developed composite empowerment indicator based on eight components: mobility, economic security, ability to make small purchases, ability to make larger purchases, involvement in major household decisions, relative freedom from domination within the family, political and legal awareness, and involvement in political campaigning and protests. The GB's members are 7.5 times as likely as the comparison group to be empowered and for the BRAC's clients it is 4.5. Similarly, women who did not participate

in GB were more than twice as likely to be more empowered simply by fact of living in villages with Grameen branches.

In “*Poverty Alleviation and Empowerment: The Second Impact Assessment Study of BRAC’s Rural Development Programme*” (1998), the author Muazzam Husain reported that period (more than four years) members who had been BRAC’s clients for the longest e had significantly higher rates of contraceptive use. For study “*The Impact of an Integrated Micro-credit Program on Women’s Empowerment and Fertility Behaviour in Rural Bangladesh*” (1998) from Steele, Amin and Naved over 6,000 women were interviewed during year 1993 and more than 4,000 women were reinterviewed in 1995. The users of contraceptives were found more likely to be participants of MFIs than non-users. Borrowers, who were clients for a year or more, were found 1.8 times more likely to use contraceptives than the comparison group. The study showed no effect on women’s mobility or decision power, but found that participation increased number of years women feel their daughters should be educated as well as the age at which they should be married.

The *Credit with Education* is methodology developed by organization *Freedom from Hunger*. The training modules in health and business skills are integrated into the regular meetings where clients of MFI repay their loans. The modules include breastfeeding of babies, nutrition of older children or/and money management. Two members of Freedom from Hunger, Barbara MckNelly and Christopher Dunford, completed two comprehensive evaluations of Credit with Educations programs: “*Impact of Credit with Education on Mothers and Their Young Children’s Nutrition: Lower Pra Rural Bank Credit with Education Program in Ghana*” (1998) and “*Impact of Credit with Education on Mothers and Their Young Children’s Nutrition: CRECER Credit with Education Program in Bolivia*” (1999). In Ghana, the participants of program experienced increase in monthly non-farm income of US\$ 36, in comparison to US\$ 17 of the control group. They were more likely to breastfeed their babies and postpone the introduction of other food until their children’s ideal age – around six months. In addition, they were able to rehydrate properly children with diarrhea by giving them oral rehydration solution. In addition, they were able to offer to their older children significantly more nutritious foods as beans, fish, eggs and milk. These led to significant difference in height-for-age and weight-for-age between children of participants and children in comparison group. In Bolivia, there was significant increase in profits of their households. The participants’ households earned more than five times as much non-farm profit as comparison

households. The participants (versus comparison households) demonstrated positive impact in breastfeeding and children's nutrition. The third of credit association, which received the best quality education, demonstrated significantly better children's nutrition than those with worst education. Thus, when Credit with Education is delivered properly may be quite effective in this regard. Pitt, Khandker, Chowdhury and Millimet in "*Credit Programs for the Poor and the Health Status of Children in Rural Bangladesh*" (2003) using the World Bank-BIDS dataset found substantial impact on children's health when borrowers were women, but not when men borrowed – the effect of male borrowing was insignificant or even negative.

As regards the impact on wages, the idea is that microfinance by creation of self-employment can remove enough people from the rural labour market and increase wages of everybody. In Khandker's study "*Fighting Poverty with Microcredit*" (1998) only the GB raised rural wages, but the conclusion of this study is limited by data. But study "*Impact Assessment of ASA*" by Michael Brüntrop et al. (1997) found that while men's wage rates were same in old ASA villages as in new ones, women's wages were 36 percents higher in old ASA villages. But there is no control for difference in characteristics between villages made.

6.2.2 The Trade-off and Mission Drift

Cull, Demirgüç-Kunt and Morduch put three questions in their study "*Financial Performance and Outreach: A Global Analysis of Leading Microbanks*" (2006) aiming on performance of MFIs: Does raising interest rates exacerbate agency problems as detected by lower repayment rates and less profitability? Is there evidence of trade-off between depth of outreach to the poor and the pursuit of profitability? Has "mission drift" occurred?³³ Based on high-quality survey of 124 MFIs in 49 countries they found that answers depend on institution's lending method. Regarding interest rates and profitability, they found that individual-based lenders that charged higher interest rates are more profitable than others, but only up to a point of threshold. Beyond threshold interest rates, profitability tended to be lower owing to greater loan delinquency and at the highest rates,

³³ The mission drift occurs when MFIs move away from serving their poor clients in pursuit of commercial viability.

to falling demand for credit. In comparison, for solidarity group lenders financial performance had tendency to worsen as yields increase throughout their sample range. Regarding trade-off, they found that larger loan sizes are associated with lower average costs for both individual-based lenders and group-based lenders – when larger loans imply less outreach to the poor, the result could have negative implication. Financially self-sustainable individual-based lenders tend to lend more to women and smaller average loans in average. However, larger lenders tend to extend larger loans and lend less frequently to women. Older individual-based lenders also do poorer on outreach measures than younger ones. Thus, the results for larger and older MFIs are consistent with the idea that as institutions mature and grow; they might focus more on wealthier clients, which can absorb larger loans. This pattern occurs more strongly for individual-based lenders.

Makame and Murinde (2006) in their study analyze trade-off between the outreach and sustainability using balanced panel dataset for 33 MFIs in five East African countries for the period 2000-2005. Using different measures of the depth (loan size) and breadth (number of borrowers) of outreach, they found strong evidence for existence of trade-off.

The recent study “*Outreach and Efficiency of Microfinance Institutions*” from Hermes, Lensink and Meesters (2008) is aimed at going beyond the existing empirical analyses in two important ways – they used substantially larger dataset and different measures of sustainability³⁴. They found strong evidence for trade-off between outreach to the poor and efficiency of MFIs. Thus, MFIs with lower average loan balances, focused more on the poor, are less efficient. Also, MFIs focused more on women are less efficient. Another results indicated that group-based lenders are more efficient and older MFIs are less efficient. The findings remained to be significant even after controlling for a large set of control variables.

³⁴ They formulated a cost function, applied stochastic frontier analysis to determine a cost frontier and determine which factors may explain the distance from the best practice cost function – cost inefficiency.

7. The Financial Crisis and Microfinance

7.1 The Asian Financial Crisis

7.1.1 The Crisis

From the mid 1980s, maybe earlier, number of developing countries in East Asia passed through period of rapid and sustained economic growth that is known as the East Asian miracle. But the economic and financial conditions began deteriorate. The first impulse was emerged in Thailand, after long period of world's largest growth rate averaging 9.4 percent annually, from mid 1996, this country reflected slowdown in export growth and over-borrowing by many business firms. The speculative outflows were threatening the convertibility of the Thai baht³⁵. Thus, in July 1997 Thai government decided to float Thai baht, cutting its peg to the US\$, and Thai currency faced large depreciation. In the third quarter of 1997, financial instability spread rapidly through East Asia – contagion effect. The stock market indexes fell and most countries experienced large capital outflows. Currency pegs were abandoned in number of countries, giving place to large depreciations. The causes of crisis are mix of different reasons but common factors included overvalued exchange rates, structural weaknesses in the financial sector and excessive short-term borrowing (role of IMF) – leading to asset price inflation, speculation and increases in non-performing loans. These events led to recession in number of East Asian countries, slower growth, sharp increase of unemployment, increased inflation and higher interest rates. The most badly affected countries were Thailand and Indonesia, on the contrary, the Philippines survived initial shock well and little impact can be observed also in India and other South Asian countries.

This economic and financial crisis could offer number of potential implications for microfinance. Economic recession resulted in fewer job opportunities in the formal sector, forcing more people into informal sector of economy. In combination with higher poverty, this increased number of potential microfinance clients – borrowers especially. At the same time, the profitability of microenterprises fell caused by increased competition among

³⁵ The sudden reversal of private international capital flows to the region occurred: from a net inflow of \$92.8 billion in 1996 to a net outflow of \$12.1 billion in 1997. This \$105 billion turnaround represented, in one year, about 11 percent of the GDP of five affected countries.

microentrepreneurs and reduced demand for their output. Resources for government development programs, often supporting MFIs, decreased. The weaknesses in financial institutions and overall financial system were made more visible in conditions of crisis. These all effects of crisis had direct and indirect implications for microfinance. The preliminary results of survey of BWTP³⁶ (April 1998) and survey of McGuire and Conroy (July-August 1998) were that the crisis affected more Indonesia than other countries, although other countries as the Philippines, Malaysia and Thailand were influenced. The crisis had greater impact on institutions serving small business clients than on specialist MFIs serving the poor. And logical conclusion is that MFIs more linked into the formal financial system suffered more.

Now we focused on individual countries, the impact of crisis on them, their MFIs, and their reaction.

7.1.2 Indonesia

In Indonesia traditionally was limited system of social protection. The protection policies were aimed at increasing economic participation through work programs and microcredit schemes. There was no unemployment system per se. The system of social assistance programs was focused mainly on people incapable of work. There were four main areas of assistance: subsidies, public work programs, microcredit programs and supplementary health and education programs. Before crisis, there were some formal financial institutions very successful in extending financial services deep into the countryside. Moreover, there was variety of very small financial institutions effectively providing financial services to rural population and the poor. They were not true MFIs, but rather financial institutions, which implemented elements of microfinance into their activities.

The most important was *Bank Rakyat Indonesia* (BRI) and its *Unit Desa* system providing financial services in through rural regions. On the other side are regulated financial institutions set up with small minimum capital requirements (minimum capital

³⁶ The Banking with the Poor (BWTP) Network initiated survey of the impact of the crisis on microfinance. Survey covered nine Southeast Asian (Indonesia, Malaysia, the Philippines and Thailand) and South Asian (Bangladesh, India, Nepal, Pakistan and Sri Lanka) countries (MicroBanking Bulletin No. 2, July 1998).

requirement is Rp 50 million³⁷) – *the Indonesian rural banks* (BPRs). The outreach of these banks was not very wide and many of them had difficulties even before crisis. The central Bank Indonesia used rural banks for the operation of various microfinance initiatives. The NGOs played relatively small role as the creators or/and operators of MFIs. But together with BPRs and Indonesian government they implemented number of important schemes focused on microfinance as *P4K program* of the Ministry of Agriculture, the *PHBK program* linking commercial banks and SHGs of the poor and the *Microcredit Program*; last two operated by Bank Indonesia and German agency GTZ.

Nowhere in the region, affected by East Asian crisis, was the impact so severe like in Indonesia. The crisis hit when Indonesia was experiencing worst drought in fifty years, international oil price was declining sharply and country was facing to social unrest and shaken political stability. As the World bank noted within one year Indonesia had seen its currency fall in value by 80 percent, inflation rate increased to over 50 percent, the economy changed from rapid growth to even more rapid contraction, unemployment raised rapidly and the stock exchange lost much of its value, foreign creditors had withdrawn, investors had retreated, capital and entrepreneurs had fled (McGuire and Conroy, November 1998; cited *Indonesia in Crisis: A Macroeconomic Update*; World bank, 1998). Collapse of domestic demand following upon exchange rate depreciation and increasing unemployment led to growing impoverishment of country. Rural areas were affected by inflow of unemployed urban workers, increased prices and reduced demand for output, which led to reduction of capacity of informal sector to offer employment and productive usage of microfinance³⁸.

The impact of crisis was visible in many areas of performance of Indonesian microfinance programs – declining outreach and loan portfolio, changes in sustainability, increasing operational costs, increasing interest rates and lower availability of resources. The repayment rates of most microfinance programs had experienced downturn. Increased operational and financing costs had to be balanced by increase of interest rates reflecting market conditions, when commercial lending and deposit rates grew rapidly. State bank 30 day deposit rates raised from 15 percent in March 1997 to 25 in March 1998, equivalent

³⁷ According to McGuire and Conroy (November 1998), all currency amounts are reported in Indonesian rupiah, in order to abstract from the large exchange rate depreciations experienced in Indonesia since late 1997. The exchange rate was in average 2342.3 Rp per US\$ in 1996 and 11,400.0 Rp per US\$ in 1998.

³⁸ On the other hand, some rural areas with export orientation, mainly tree crops, were benefiting from the devaluation.

deposit rates for commercial banks were 17 and 28 percent, respectively and kept growing to around 58 percent for both types of banks. The reduced outreach was caused by lower availability of resources, more cautious policy of lending or/and stricter collateral requirements. Before the more detailed look on particular types of microfinance programs, we should mention that Bank Indonesia took steps to improve banking system and to restore confidence of depositors. The guarantee, determined to stop outflow of deposits from private commercial banks, which had lost 12 percent of their deposits only during November 1997, was declared in January 1998. Much of the money support pumped into banking system was redeposited in the state banking system. Surprisingly, neither guarantee nor the liquidity support were determined for rural banks, even though BPRs are named in the Banking Act with commercial banks as two kinds of banks whose operation is permitted in Indonesia. Thus, the small rural banks continuously faced to outflow of depositors.

A leading MFI, NGO Bina Swadaya, stated that 16 percent of clients in its three branches had gone bankrupt in first months of crisis and in seven of its branches; from 20 to 70 percent clients were in repayment troubles. Bina Swadaya had solved this situation by extension of loan repayment terms or their rescheduling. In addition, it found necessary to increase lending rates by between 0.5 and 0.75 percentage points per month in March 1998 to cover increasing operational costs and loan losses.

There was also evidence of reduction in outreach of microfinance – loans outstanding under Kupedes (BRI program) declined by 33 percent over the year to June 1998 in constant price terms (high consumer price inflation involved). Loans by BPRs fell slightly by 28.7 percent, from Rp 106.9 billion in March 1997 to Rp 90.4 billion in March 1998. Although, BRI recorded decreasing repayment rates even before crisis – portfolio at risk rose from 3.65 percent in December 1996 to 4.41 percent in June 1997 and 5.94 percent in July 1998 – despite the worsening crisis the rate increased in August to 5.81 percent. BRI's deposit rate was among the lowest on offer from the state bank but still was above 50 percent in August 1998. In need of capital, in half of 1998 BRI increased interest rates on loans above Rp 3 million from Rp 3 million from 1.5 to 2 percent flat per month, interest rates on loans up to Rp 3 million increased to 2.2 percent flat in September 1998. Although, BRI increased also interest rates on rural savings by between 4 and 5 percentage points per annum, it earned enough to cover average costs of funds. Like we mentioned above, the government guarantee of deposits in commercial banks supported 10 percent

increase of deposits in BRI (in constant price terms), from 7,741.2 billion in June 1997 to Rp 13,580.7 billion in June 1998. Although savings from poor rural people fell by 7.6 percent in real terms over the period of crisis, term deposits increased dramatically by 186.6 percent after inflation. In June 1997, loans outstanding were equivalent to 55.6 percent of the value of savings, but in one year later, this ratio had fallen to only 33.8 percent. The primary term deposit rate was tripled, from 19 to 57 percent. The rates for savings from the poor remained almost same, only small increase in top deposit rate occurred, so the drop in amount of savings by 7.6 percent in real terms could be taken as successful – the poor still were able and moreover willing to keep their money in BRI under such difficult circumstances.

Data from rural banks showed that impact of crisis was smaller for poor microborrowers as petty traders and vendors, than for “richer” small business borrowers. The rural banks faced worse repayment problems than other microfinance programs, 24 percent non-performing loans in June 1998 (for all rural banks) (McGuire and Conroy, November 1998; cited Reille Xavier and Gallmann Dominique (1998): *The Indonesian People’s Credit Banks (BPRs) and the Financial Crisis*; Paper prepared for the Second Annual Seminar on New Development Finance, September, Goethe University of Frankfurt). One of the surveyed rural bank recorded that non-performing loans were at 50 percent level for small industry borrowers and only at 12 percent level for market vendors and traders. In light of these events, many rural banks began providing loans only to establish customers with good credit history and tightened up collateral requirements. The amount of deposits declined through crisis by 30.5 percent in constant price terms, from Rp 1,642.4 billion in March 1997 to Rp 1,587.4 billion one year later. The fall was slightly larger for time deposits than for savings accounts, fall by 34.6 percent and 23.1 percent, respectively. However, there were differences, one rural bank recorded increase in deposits by 25 percent during one year until January 1998, whereas another one experienced decline by 28 percent over same period. The established government guarantee for commercial banks even more supported withdrawing from rural banks and depositing them in BRI Unit Desa, although BPRs with strong community base and sound portfolio performed well during crisis. Even if most rural banks were in troubles – total assets declined by 25.4 percent in real terms and capital stock declined by 17 percent in real terms over the one year to March 1998 – the commercial banks were affected more dramatically. Its role played that rural banks had no foreign exchange exposure and weak linkage to formal

financial system. The most rural banks did not raise their lending rates until March 1998³⁹, except one, which had increased both deposit and lending rates by around 1 percentage point per month. But the increase was made too late and not enough. For example, BPRs in Java charged effective interest rates in range 45-55 percent, lower than commercial banks, which had interest rates in interval of 50-60 percent.

The implemented schemes focused on microfinance, mentioned above, showed also decline – credit outstanding to the “Small Farmer Groups” under P4K program fell by 10 percent in nominal terms (not inflation adjusted) over the one year to April 1998 and the arrears grew substantially. PHBK program grew rapidly in nominal terms but in real terms new loans declined around 10 percent over the one year to March 1998. In addition, repayment rates under PHBK program worsened, 12 months arrears increased from 6 percent in March 1996 to 9.8 percent in March 1998 and 11.2 percent in May. Cumulative repayment rates declined from 97.1 percent in March 1996 to 94.7 at the end of May 1998.

The government reaction on crisis consisted in achievement of three main objectives – maintaining food security, preserving access to critical social services and expanding employment and income generation opportunities. The first two objectives had been achieving by implementation of food subsidy programs and supporting education by school grants, scholarships; and improvement of health services by health and nutritional support of children and mothers with infants. The achievement of third goal included creation of new program – Pemberdayaan Daerah dalam Mengatasi Dampak Krisis Ekonomi (PDM-DKE – Empowering Regions to Overcome the Impact of the Economic Crisis)- which was combination of job creation and microcredit initiative. This program should provide grant and revolving credit funds to poor and unemployed part of population. The other goal of government was in restructuring and strengthening financial system. This included the injection of substantial amount of liquidity and guarantee of deposits in commercial financial sector. Before the downfall of dictator Soeharto, he wanted to enforce the increase of minimum capital requirements for rural banks from Rp 50 million to Rp 500 million which could lead to closure of many BPRs. In July 1998, Bank Indonesia tried to help also to BPRs by announcement that Working Capital Credits would be made available to BPRs to expand financing of small enterprises and support of employment creation. These credits could be available at 15 percent per annum (or 1.3 percent per month in comparison to current market rates in the sector in range of 2-4

³⁹ According to McGuire and Conroy (1998), in March 1998 three BPRs increased their lending rates.

percent per month, which created criticism that this measure could distort local credit market.

7.1.3 Thailand

Even before crisis, Thailand had a wide range of social assistance programs focused on the poor to help them generate income. The major antipoverty programs could be divided into three groups – cash transfers (including family allowance and social pension allowance to supplement the pensions of the elderly poor), in-kind transfers (including subsidized medical services, housing programs and school lunch program) and income generation programs. But many components of social protection systems common in developed countries had lacked such as unemployment insurance, pension scheme for private sector and large-scale transfer programs for the poor. For mitigation of impact of crisis, the government allocated additional funds for strengthening the country's social safety nets over year 1998. The main reforms took place in four key areas – employment and income maintaining program, protection and targeting of public expenditures, income security scheme and community capacity building.

Under the first group of reforms the new program was implemented – *Poverty Alleviation Program* (PAP) focused specially on the poor. The PAP was microcredit program providing loans to poor households for income-generating activities. The households with income under 5,000 baht per person per year could borrow without interest. Already in 1995, PAP was operating in 10,000 villages and provided 2.8 billion baht in loans.

Like the measures undertaken indicated, the Asian crisis contributed to increase of poverty in Thailand. During one year from February 1997, the employment fell by 800,000 and the unemployment rate rose to 4 percent. This led to return of unemployed urban workers to rural areas. Like in Indonesia, the crisis limited the scope for non-agricultural activities in rural areas, which contributed more than 60 percent of rural income before crisis. On the other hand, the depreciation of Thai baht mitigated the impact of crisis on farmers by boosting prices of agricultural products. Thus, the *Bank for Agriculture and*

Agricultural Cooperatives (BAAC) lending to around 85 percent of farm households had not been affected largely by crisis.

Microfinance system in Thailand was represented by small community organisations funded by government programs, with NGOs having limited role. One of the main government programs was operated under *Urban Community Development Office* (UCDO). The growth of this program was not high during the crisis – number of community organisations with loans increased from 165 in June 1997 to 204 a year after and total outstanding loans increased only by 4.9 percent, from B 473 million to B 496 million. After adjusting inflation, this small growth became small decline. Total savings of the organisations increased by 11.2 percent over the given period. As usual, the repayment rates increased. The number of community organisations with loans from UCDO with repayment problems increased from 24 to 56 and loan non-recovery rate increased from 0.8 percent to 3 percent, over one year until June 1998. Loan non-recovery rate on loans from community organisations to their members increased from 6 to 6.8 percent over same period. Despite these facts, the UCDO did not change neither requirements for providing loans nor interest rates. In comparison, *the Government Savings Bank credit program* for rural development continued to expand – total loans outstanding increased by 18.2 percent in one year from June 1997. Non- performing loans from bank to individual saving and credit groups were around 0.7 percent at the end of June 1998.

The recover in Thailand started already in 1999 largely due to strong exports. Relatively weak baht supported exports and increasing domestic spending caused by several mega projects and incentives known as Thaksinomics by name of Prime Minister Thaksin Shinawatra.

7.1.4 The Philippines

The Philippine economy deteriorated because of Asian crisis but did not suffer as much as others did. The interest rates were increased by central bank by 1.75 percentage points in May 1997 and again by 2 points in June. In July, the Philippine Central Bank was forced to intervene to defend the peso by increase overnight rate from 15 to 32

percent – the peso fell significantly from 26 pesos per dollar to 38 pesos per dollar in mid-1999 and 54 pesos in August 2001.

The microfinance system in the Philippines was created by some 300 NGOs operating as retail MFIs. Most of them were very small and not with wide outreach. Survey of 131 retail MFIs, including all the largest MFIs, from 1998 recorded that their outreach was only 67,000 clients. Almost 80 percent of total outreach was reached only by 28 retail MFIs and only these could show off more than 500 clients in their portfolio. In addition, large number of small rural banks and slightly larger thrift banks was operated at the local level and their clients were also among the poor. In fact, three specialist MFIs were registered as rural banks, also one of the largest MFIs – *CARD Rural Bank*. Specialist MFIs and small rural banks got their funds from different sources. Most specialist MFIs obtained funds from donor agencies or government programs. Rural banks and some specialist MFIs had credit lines with commercial banks. The *People's Credit and Finance Corporation* (PCFC) advanced loans to both specialist MFIs and rural banks. Another sources were member savings and in case of rural banks also deposits from the public.

The crisis affected all levels of financial system of the Philippines but not so badly like in other countries. The availability of resources in commercial sector as well as in microfinance was disturbed and funds became more expensive. Thus, because of increasing cost of funds, the interest rates on loans in some MFIs increased. The outreach of specialist MFIs changed, but not declined considerably. But the repayment performance remained still good. The repayment records of leading MFIs, especially poverty-focused programs, were not affected hardly even. The poor borrowers had maintained very good repayment culture, whereas small business borrowers noted repayment problems. This could be caused by great need of the poor to maintain access to credit and thus, they tried more to make their repayments even in difficult period of crisis. Other explanation was that people sought for cheaper products and services which increased demand for products offered by poor microentrepreneurs. Also, the close connection among MFIs and clients played its role. The depreciation of peso had badly affected some members of the *Alliance of Philippine Partners in Enterprise* (APPEND), network of MFIs, which had loans from private foundations abroad denominated in US\$. Some institutions had problems with staff morale caused by that staff salaries had not kept pace with inflation. Also, criminality in some areas increased.

Let us have a look at individual financial institutions.

The loan portfolio of one large specialist MFI, TSPI Development Corporation, had fell from P 110 million in November 1997 to P 95 million in June 1998. The total number of clients did not declined much – the reduction was mainly in Sakbayan program which offered loans to trishaw drivers, than in Kabuhayan program focused on microloans for poor microentrepreneurs. Moreover, demand for loans under Kabuhayan program had even increased. Unfortunately, the lack of resources did not allow meeting all claims. Logically, the crisis reduced income of borrowers but also many of them just used the crisis as excuse for avoiding or delaying repayments. Thus, the overall past due rate had increased from 2 to 4 percent over one year until June 1998. However, the past due rate under Kabuhayan program even declined significantly from 5 to 1 percent over same period. This again indicates that poor borrowers remained paying their obligations rather than small business borrowers. TSPI using stepped interest rate structure increased some interest rates to standardise them at 3 percent per month level.

The member of APPEND *Alalay sa Kaunlaran sa Gitnang Luzon* (ASKI) had reported increase of borrowers in one-year period from June 1997, from 4,072 to 4,649. The loan portfolio increased just from P 19.9 million to P 20.1 million, what is slight decline where inflation is included. Thus, the fact that number of borrowers had increased as well as demand for loans among the poor while loan portfolio remained unchanged leads to the same conclusion like in TSPI – lending to small business borrowers was more affected than lending to the poor. As well as TSPI, ASKI had not enough resources to meet all claims and thus the lending system became more cautious and selective. Also, this led to increase in repayment rate over the crisis. Therefore, ASKI had no need to increase interest rates as well as TSPI and CARD.

CARD had enjoyed very strong growth in the period of crisis. The number of borrowers increased from 7,833 to 15,138 in one year period from June 1997. Loans outstanding grew even more rapidly from P 23.6 million to P 66 million. This could be caused by fact that CARD as rural bank had access to savings also from the public and also that CARD provided loans only to poor borrowers. The monthly repayment rates remained between 99.6-100 percent during the crisis. And the portfolio at risk was less than 0.1 percent in June 1998 (McGuire and Conroy, November 1998).

The data about small banks from central bank reported that net loan portfolio of thrift banks fell from a peak in September 1997 (P 144.8 billion) to P 130.4 billion in June 1998. The net loan portfolio of rural banks continued increase by 22.3 percent every year. Over the same period as thrift banks reported decline, the net loan portfolio of commercial banks increased by 5 percent. Also, the loan portfolio of PCFC continued growing over the crisis. The non-performing loans increased for both thrift and rural banks. In case of thrift banks, the increase was from 7.9 percent in June 1997 to 17.4 percent of net loan portfolio in June 1998. Again, also PCFC reported repayment problems – past due rate on its loans to retail MFIs had increased from 0.8 percent in March 1998 to 3 percent in June 1998.

As we said before, the availability of resources for microfinance was reduced. At beginning, commercial banks had cut down the credit lines to specialist MFIs, evaluated as risky operations. The increased interest rates made commercial loans less affordable for many MFIs – borrowing rates for MFIs achieved their peak early in 1998 at around 27 percent level and then fell again to 22 percent reported in July 1998. Like in case of Indonesia, also in the Philippines people had been moving their savings from thrift banks to commercial ones. Between June 1997 and June 1998, total deposits of thrift banks decreased by 9.3 percent and deposits of commercial banks increased by 22.8 percent. The same thing occurred also in case of rural banks – fall by 0.5 percent in third quarter of 1997, but the increase came around again in last quarter of the year by 4.7 percent.

At the end of 1997, the central bank had begun increasing the minimum capital requirements for establishing banks by between 54 and 100 percent, depending on the type of bank. This measure could serve to strengthen the banking system because crisis had revealed weaknesses among thrift and rural banks as well as among commercial banks. By July 1998, five thrift banks and eight rural banks had been closed and twenty banks had used emergency loans from the central bank. But as we will mention later in current financial crisis, the failures of banks was not caused by inadequate capital but because of bad management.

7.2 The Financial Crisis in Latin America

7.2.1 The Crisis

When the Asian crisis spread over the world, in years 1998 and 1999, it reached also shores of Latin America. The mainly discussed affected countries were Argentina, Brazil and Mexico, but also other countries suffered heavily without such publicity – including Bolivia, Colombia, Ecuador and Peru. There were other factors which contributed to deterioration of crisis in particular countries – civil war in Colombia, the El Niño-Southern Oscillation phenomenon in Peru and Ecuador and the crackdown on coca production in Bolivia.

The economic slowdown heavily influenced the financial statements of commercial banks – growth of loan portfolio stagnated, profitability fell and problems with loan repayments began to rise. The banking regulators were trying to prevent growing number of banks' falls. The MFIs were not immune to the economic situation in Asia as well as in Latin America, but after years, we could say that well-established MFIs performed as well or even better than their counterparts in the commercial part of banking sector did. Some MFIs showed that their business strategy could also be a powerful tool for surviving and growing in hard times.

For example, in terms of growth the leading MFIs of Bolivia, Colombia and Peru⁴⁰ have outperformed countries' commercial banks every year since 1997. After hard times in 1998 and 1999, the portfolio growth of MFIs reached substantially high level in 2000 – 47.9 percent in Peru and 26.8 percent in Colombia. At the same time, although growth of commercial banks' portfolios also improved slightly, still they reported almost no growth rates. In case of Bolivian MFIs, they still outperformed country's commercial banks every year from 1997 but the pace had slowed. The worst time of Bolivian MFIs was in 1999, when Borrowers' revolt took off.

The commercial banks of Bolivia and Peru managed to keep their returns on break-even level, but Colombian banks experienced substantial fall of profits. On the other hand,

⁴⁰ Bolivia – commercial bank BancoSol, private financial funds Caja Los Andes, FIE and Prodem; Colombia – five affiliates of Women's World Banking and finance company Finamerica; Peru – municipal savings banks of Arequipa, Trujillo, Sullana, Ica and Tacna.

MFIs managed to maintain not only high growth rate of portfolio but also its quality during the crisis. For example in Colombia through the period 1997 - 2000, the loan delinquency rates of MFIs were kept near to level of 3 percent but rose to double digits for commercial banks.

Table 11: The Years of Crisis in Particular Countries

Country	Year of Crisis
Argentina	2001
Bolivia	1999
Brazil	1998
Ecuador	1998
Mexico	1994
Venezuela	1994

Source: Numen Ferro and Bueso-Merriam; Fonseca; Kahn and Jansson

The MFIs used many strategies to prevent bad impacts of crisis but the three general types can be identified – survival (case of *FIE*), consolidation and growth. These tactics had evidently common goal to maintain healthy portfolio, liquidity, solvency and low recovery and operating costs. The MFIs with sufficient capacity and preparation could begin to serve new segment of clients or to offer new services. But all these strategies have depended on preserved loyalty of clients and adaptability of both clients as well as MFIs. The ability of adaptation of low-income individuals and enterprises was key advantage for MFIs in comparison to large commercial institutions serving wealthier clients. The MFIs, as Argentinean *FIE*, were inspired by adaptability of their clients and began to adjust their business activities to survive the period of crisis – extension of open hours, working also on Sundays, visits clients in their shops and homes, extension of repayment period or rescheduling of delinquent loans.

Next important factor which helped MFIs to survive was international assistance during crisis. The study of Westley and Shaffer which stated that microenterprises in Brazil, Mexico, Belize and the Dominican Republic generated 20 percent of their GDP influenced big financial institutions as the IDB to support microfinance sector. In period from 1990 to 1999, the IDB financed Latin American microfinance projects by amount of more than US\$ 690 million⁴¹. Such international financial injections were important for

⁴¹ Glenn D. Westley, Sherrill Shaffer (September 1999): Credit Union Policies and Performance in Latin America; Journal of Banking and Finance, Volume 23, Issue 9, pages 1303-1329 cited in Fonseca, 2007.

example for *Banco Solidario*, Ecuador. Because of its well-organized business plan, they received US\$ 30 million from group of international investors when Ecuadorian government was not able to obtain financial aid.

7.2.2 Argentina

During the Argentine crisis FIE was in serious troubles. The government made several measurements focused on halting capital outflow. Through laws *corralito* and *corralón* the government froze account-holders' bank deposits and business's bank term deposits which blocked the access to money of microfinance companies. The devaluation of pesos and conversion of the dollar-denominated deposits to pesos were almost the worst effects of the crisis. The deposits of US\$ 200,000 had suddenly value of less than US\$ 70,000. Moreover, FIE could not get the money out of the bank – its numbers became red and its international debt had tripled.

As we said before, the low-income clients began adjusting to bad times by increasing of working hours, involving of more family members in business, decreasing of their products' prices. The same tried the MFIs. They prolonged opening hours of their offices, began working also on Sundays, and initiated visiting clients in their shops and homes and so on. When borrowers went in troubles with repayment, their loans FIE began with adjusting of loans' conditions. It prolonged period of repayment of loans made before crisis; shortened terms and decreased amounts of new loans; made possible to obtain parallel loans; reschedule delinquent loans and even obtain loans to clients with repayment problems in their history.

The FIE required similar adjustment in case of its own debts from Argentinean finance company *FONCAP*. These unusual measures fructified. The FIE could repay more than 20 percent of its international debt and promised to repay the rest during the following three years. Recovery period had continued. By the end of 2003, the average loan was US\$ 759, big increase from US\$ 287 in June 2002 but still far away from US\$ 1,751, which was reported in November 2001. The FIE's portfolio had begun growing from March 2002 and reached the value of US\$ 750,000 in October 2003, also the number of clients and geographical coverage had increased. The terms of repayment were reduced from 10 to 3.1

months in average and rate of delay repayments decreased from 50 to 9 percent in two years. Thus, the FIE has continued to cooperate closely with its clients even though it returned to the mainstream management as its parent company FIE Bolivia settled before crisis. One example of close cooperation with low-income clients can be mentioned that the new FIE's loan officers are recruited from the group of clients, because they understand best the problematic situations of creditors.

7.2.3 Bolivia

The crisis reached Bolivia after several years of deterioration which gave enough time to MFIs to adjust and adapt to arisen situation. The critical year was year 1999 when the consumer credit market had become saturated. But as we said before, MFIs of Latin America overcame crisis quite wealthy and in most cases performed better than traditional commercial banks.

The events of year 1999 called the Bolivian Borrowers' Revolt. Consumer finance companies facing increasingly saturated market from 1998 began to focus on lending to microentrepreneurs. As they had no experience in microfinance, the only criteria for accept the request for loan was already secured loan from some MFI. Thus, the period of economic slowdown forced many microenterprises to borrow from these consumer finance companies to compensate declining sales which led to accumulation of debts in addition to their actual debts from MFIs. But during the continuing recession, many debtors defaulted on their consumer debts but continued repaying their microloans. The three largest MFIs operating in Bolivia – *BancoSol*, *Caja Los Andes* and FIE with about 140,000 clients together – reported less than 500 cases of arrears directly related to the borrowers' revolt (Damian von Stauffenberg, director of MicroRate, cited in Kahn and Jansson, 2007). Due to increasing number of over-indebted people, two borrower associations were created. Both these organisations worked on the same principle – they promised, for fixed membership fee of Bs 50 (approximately US\$ 8.5), debt relief through borrowers' revolts (Kahn and Jansson, 2007). The number of their members grew considerably in following months and indebtedness of individual clients decreased.

Four leading MFIs - Caja Los Andes, FIE, BancoSol and *Prodem* - used three main tactics to survive crisis. Firstly, they did not lend to business groups tied to their owners, as was common among Bolivian commercial financial institutions. Second, the MFIs even increased contact with their clients in unlike commercial institutions. At last, they did not lend more than would have been advisable and thus they avoided many problems with repayment.

As in Argentina, the MFIs got closed to their clients. They cooperated with clients with repayment problems by cutting their fees, rescheduling repayments and so on. They tried to expand their base of clients by attracting small and medium enterprises (SME) and wage earners, by simplifying lending process and even by opening more branches. Also, non-credit products as government bonds and government housing payments were established. As we said before, MFIs tried to enlarge their coverage by new branches – Prodem, for example, placed 60 branches into rural areas in the midst of the crisis, while the others expended to urban areas with focus on wage earners and SMEs.

The results were wonderful. The loans and deposits grew. Although the profitability fell in 2001, still the rate was in average 10 percent in comparison to 3 percent for commercial banks. Rates of bad debts were kept low, Caja Los Andes kept bad loans only on level of 6.5 percent of the portfolio, compared with 20 percent for large commercial banks. Moreover, commercial sector was forced to reschedule 35 percent of their loans, while microfinance sector rescheduled only 5 percent of their loans (Pedro Arriola, general manager of Caja Los Andes, cited in Fonseca, 2007).

Problems were arisen in case of loan guarantees. Every MFI had own strategy how to deal with this problem. The FIE provided loans to many Bolivians living as undocumented workers in Argentina. FIE sent collection agents, accompanied by clients' friends, disguised as police to them. This strange scheme worked, the percentage of delinquent loans fell from 50 percent in February 2002 to 7 percent 10 months later. On the other hand, Caja Los Andes used opposite approach – relaxed demands for guarantees and improved lending system to get new clients. One tool was new human policy included differentiated interest rates based on individual client's quality and abilities.

The establishment of credit bureaus which enable to MFIs monitor their evolving debts was another step forwards the improvement of microfinance system in Bolivia. MFIs

went from crisis educated, with more coverage and preparedness for any other economic crisis.

7.2.4 Ecuador

In 1998, Ecuadorian economy began to spin out of control. The economy was hit hardly by extreme weather conditions (El Niño), costly border war with Peru, stagnated world prices for Ecuadorian oil export and political crisis when the head of state was changed for three times in short period. The economic growth had stopped in 1998 and the economy contracted 7.3 percent in 1999.

In 1998, the most important MFI in Ecuador – Banco Solidario – was only two years old. Let us focus only on its experience. In midst of crisis, Banco Solidario increased its lending to micro and small entrepreneurs from US\$ 4 million in 1998 to almost US\$ 20 million two years later. The proportion of its loans for micro and small entrepreneurs rose from 10 percent to 60 percent in same period. Thus, the Banco Solidario became most profitable bank in Ecuador in 2000.

Banco Solidario used four main tactics which helped it successfully survive the crisis. At first, Banco Solidario became investing in government bonds, which were significantly discounted during the crisis, and in foreign exchange transactions on the spot market. In addition, they tried to operate with derivatives, mainly futures, in exchange rates that yielded solid profits. Second, their international investors, including ProFund, cooperated through bad times and Banco Solidario received additional short-term financing. Third, Banco Solidario participated in government-subsidized housing program. Fourth, they ensured that microlending had its advantage, not only that small clients were more resilient to crisis but also they are more reliable in repayment than larger clients are.

After crisis, Banco Solidario became even more cooperated with own clients. They established flexible payments with amortization of principal and interest coordinated with clients' needs to support long-term savings. They also implemented special program for emigrants, microcredit cards and savings and loan products aimed on housing. In 2006, Banco Solidario was ranked as one of the Ecuadorian five best banks.

7.3 The Current Financial Crisis

7.3.1 The Crisis

The present global credit crisis caused by subprime mortgages seems not to be ideal situation for obtaining unsecured loans to very poor people without relevant credit history. But in comparison with other financial institutions, the MFIs have survived past financial crises relatively not affected. As we have seen, during the Asian crisis and crisis in Latin America the institutions serving poor people generally performed better than commercial banks. For example, Indonesian network of BPR - 2,200 institutions serving the low end of the microfinance market with loans equal to US\$ 77 in average – held its collective loan portfolio more or less steady through the Asian crisis (Everett, 2008). But at that time, the clients, microenterprises and MFIs themselves were not integrated into local banking and currency markets so much, into international financial markets not at all.

Microfinance has now many more links to domestic and international financial markets, thus the results of today's financial crisis is more likely to more effecting also MFIs. The effects of present crisis are likely to be more complex, deeper and more difficult to predict than past financial crises. One thing can be clear, in medium and long-term the worldwide recession will affect much more poor people and moreover, will create the new poor. According to the World Bank's estimate, the worsening economic conditions could push additional 65 million people under the US\$ 2 poverty line. These people are formerly called "nearly poor". The consequences of crisis as credit crunch, currency dislocations, job losses and fall in demand will influence the MFIs in different ways.

The size of impact depends on several factors, such as structure of institution's liabilities, institution's financial state and economic health of clients. So far, there is little evidence how microclients have been affected by the crisis. Moreover, it is not easy to identify which effects are directly related to the crisis and which are connected to pre-existing situations or conditions. What is evident, from data which can be found, that increasing prices and economic slowdown leads in most cases to decreasing income of households. But not in all cases, as we will see later, some microentrepreneurs are able to earn on the crisis. Problem of rising prices of food or/and energies leads to many

withdrawals of savings accounts, cutting expenses on food and also difficulties with repayment of loans.

But yet the big MFIs seem to be in financial health, not affected at all. Mohammad Yunus from the Grameen Bank is quite sure that business will remain not touched.

“We have not been touched in any way by the financial crisis. The simple reason is because we are rooted to the real economy – we are not paper-based, paper-chasing banking. When we give a loan of \$100, behind the \$100 there are chickens, there are cows. It is not something imaginary.”

Muhammad Yunus, 2008⁴²

The true is that MFIs operate very differently from US subprime markets in ethos, purpose, methodology and loan characteristics. MFIs lend relatively small amounts of money to poor people in developing countries to start small but profitable businesses, not to buy overpriced homes or goods. Other big difference is in microfinance risk-management techniques – personal knowledge of clients, conscientiousness in ensuring repayment ability and in solutions of delinquency problems.

The most of MFIs successfully survived past financial crises, but history does not have to be guide for predicting of outcomes of all future crises. Microfinance is much more connected to financial market; much more MFIs are already transformed into regulated deposit-taking banks with access to commercial funding sources. By the early 2000s, MFIs have appeared on international capital market – first microfinance IPO of Bank Rakyat Indonesia and the emergence of microfinance collateralized debt obligations (CDOs) as well as IPO of Mexican Banco Compartamos. The IPO involved secondary offering of 30% of bank’s stock and raised substantially US\$ 40 million, yielding to investors the international rate of return of over 100% compounded over 8 years. The bank’s issue was 13 times oversubscribed (Watson, 2009).

By 2007, the worldwide MFIs had received (estimated) US\$ 5 billion of foreign investment from developed countries. As result, present microfinance system is connected to global markets by unprecedented degree. And these markets withstand to high degree of

⁴² Source: www.grameenbank.org

turmoil combining the worst effects of crises in 1990s. The global trade of year 2009 is projected to contract for the first time from 1982. Both GDP growth of developing countries and private capital flows to developing countries are projected to fall to roughly half their 2007 levels. There emerge reductions in foreign investment and remittance flows, increases in country risk premiums and local credit spreads (Watson, 2009).

The full effect of the global crisis and its triple shocks – *economic contraction, currency depreciation* and *scarcity of credit*, will fully show its power in emerging countries in the second half of year 2009. MFIs' PAR +30 ratios already increased in the first quarter of 2009, but still remains below 5 percent for the most leading MFIs (CGAP). This year will be a key year to test the resilience of microfinance to macroeconomic turmoil.

7.3.2 The Impact of Crisis on MFIs

Recent data so far show that global financial crisis will stress MFIs and their clients, but the sector is quite robust and may emerge even stronger than before. The crisis has pointed out MFIs to the important role of local *sources of funding*. When international funding taps dries up, local deposits become even more critical to fuel MFIs' lending.

“Microfinance institutions have become more integrated into the mainstream financial system, and so they are more vulnerable to market shifts like credit contractions than they were in the past.”

Elizabeth Littlefield, CEO of CGAP, 2008

According to interview with Tomáš Hes⁴³, the mostly affected MFIs will be those smaller, poorly administered and those that depend on few sources of external funding. The major players with more than 50,000 clients may even profit from this situation as there will be less market pressure and new opportunities will open. The regulated entities that accept deposits will undoubtedly have stronger position to those entities that depend

⁴³ Tomáš Hes is cofounder of Czech microfinance project myELEN.com and associate of Mexican MFI FIPS. Presently, he is cooperating also with company Oikocredit.

on loans from development banks or foreign funding. Loans in USD or EUROs will attract new types of conflicts, due to rising FX risk and in some cases may be cause for bankruptcy of MFIs as these will not be able to service the debt.

Generally, the growth of the microfinance sector is (and will be) halted and is predicted not to reach more than 20 percent per year in case of Mexico. This number is visibly lower than in the past, when the growth attained records of 40-50 percent per year. Another effect will be the consolidation of MFIs and thus the number of microfinancing entities will slightly decline. However, the sector will be less affected than other major economic sectors as the crisis will affect its growth and quality of assets, but will not cause any major disruption, due to relative isolation of the microfinance markets from the beat of the global economics. The crisis will thus help the strongest ones and hurt the young and weak ones.

As we said, the impact of crisis on MFIs depends on many factors – *funding structure, financial state, location and economic health of clients*. In this section, we go through particular groups of MFIs divided according to factors.

The poor clients of MFIs are still quite isolated from happening of international financial markets. Many of MFIs are *funded internationally*. According to CGAP, foreign capital flows into MFIs tripled between 2004 and 2006⁴⁴. About half of funding comes from aid budgets, but the share of private money is growing. Many MFIs, especially from Eastern Europe and Central Asia, have also loans from foreign banks. The IFC provided 55% more each year to MFIs between 2004 and 2007. *Funding* from big institutions like IFC is likely to be stable, but aid budgets and other sources of funding are drying out.

For example, we can see that at least two investors into microfinance are experiencing *slowdown in inflow of capital*. As result, *Oikocredit* has changed its investment priorities, has aimed more on smaller MFIs and MFIs in rural areas and has become even more selective in committing capital. *Cordaid* had similar experience – decrease in investment flows from private, social and commercial investors; decrease in local funding and increase in number of defaults and rescheduling requests caused by lack of local funding and decreasing margins due to rising interest rates which cannot be fully passed on clients (CGAP, 2008).

⁴⁴ Through the same period, the microfinance portfolios of private investment funds grew from US\$ 600 million to US\$ 2 billion.

Box 4: Answers to Liquidity Contraction

According to CGAP (2009), national and multinational development agencies have responded to the credit crunch by establishing liquidity facilities:

- In October 2008, the IDB announced US\$ 20 million financing facility to help Latin American MFIs during the crisis.
- In November 2008, the Reserve Bank of India extended US\$ 1.5 billion credit line to country's development bank for small industries – SIDBI.
- In February 2009, KfW and IFC launched US\$ 500 million cross-border refinancing facility for MFIs.

Such emergency funding is really needed in these times but should be only short-term and used as last possibility. In other case, this funding could create disincentives to deposit mobilization.

Source: CGAP, 2009

Borrowers in foreign currency have problems with *exchange rate fluctuations*. Local banks funding MFIs are limited by global conditions. The MFIs could find difficult to refinance already existing debts. According to IFC, most MFIs have loans with one or two years' maturity and there is potential *refinancing gap* of US\$ 1.8 billion over the next 12-15 months. These problems with financing could encourage some MFIs to become legally regulated institutions able to collect deposits instead of constant chasing for funds.

From this point of view, we can say that MFIs mostly affected by global *liquidity contraction* could be *non-deposit taking MFIs* funded primarily by foreign debt. The money from domestic and international banks and funds are limited, slower and more expensive⁴⁵. The increasing interest rates, FX losses and more expensive funds lead to increase in operating costs, which are not always transferable on their clients. Thus, *deposit-taking MFIs* should survive the crisis better. Many of them are well isolated from refinancing risk and have a little (if any) need of external funding.

⁴⁵ According to CGAP, the rates in Latin America and South and Central Asia grew from 1% to 4%.

Many deposit-taking MFIs collect not only deposits from poor but also from non-poor customers. Here should be problem, because non-poor depositors could be more sensitive to the economic downturn. The loss of confidence and run on deposits in USA and Europe can also lead to same reaction in developing countries. The high *withdrawals* are and will be caused by high prices of food and energies and lower remittances. Another reason could be that at least some microloans finance consumption, not investment, and thus debtors will need to withdraw their savings or use new loan for paying them off. This could work as long as new credit will be available. As Tomáš Hes said, many Mexican MFIs repay in advance their USD liabilities, in order to prevent FX related problems and in many cases register reduction of the demand for microcredit. According to data of Prodesarollo, 60 percent of Mexican MFIs are threatened due to reduction of funding.

These circumstances – the increased prices of food and energies and pressure of inflation – could also endanger the *ability to repay clients' loans*. According to the International Food Policy Research Institute, increasing food prices have the greatest effect on poor and food-insecured people, who spend between 70 and 85 percent of their household income on food (MBB, Spring 2009). The World Bank expects that food prices will remain high in 2009 and 2010.

Many microbusinesses serve local needs by basic products, which could be unaffected or even supported by crisis. In time of crisis, people prefer cheaper or less quality products, which microbusinesses usually offer. Microenterprises, as in previous crises, are very adaptable. Microentrepreneurs could adjust to deteriorated conditions by involving of more family members in business or by adjusting the portfolio of products and/or their prices. Businesses serving subsistence goods as food and clothes could even earn on crisis because the demand for these goods remain steady in any times. MFIs highly serving SMEs, which have tendency to be more influenced by economic slowdown, or focused on consumer lending will suffer the most. Also, the *decreasing remittances* from abroad will have bad effect on microclients, which used microloans as consumption loans, and remittances are used for repayments.

The financial problems of MFIs could provoke the loss of confidence that MFIs could be able to provide other loans. In this situation, the debtors could *lose incentives to repay* their already existing debts. The microfinance system is established, among others, on principles of mutual responsibility and confidence in future funding in case of no

repayment problems. Therefore, why should microcreditors repay their loans when no else will be available? This could deteriorate the MFIs' loans portfolio quality and MFIs should more focus on monitoring their clients and efforts on clients' confidence. According to IFC's data from 150 MFIs, the share of PAR +30 already increased from 1.2% before crisis to between 2-3% in these days (IFC, March 2009), which is still very low by commercial standards. According to Hes, in Mexico the bad debt had already risen visibly – in the sector of village bank credit up to 5-6% of PAR +30 and predictions are risen up to 7-9%. The numbers are usually burdened with several percentage points more, as it is impossible to prove the correct indicator and MFIs usually disguise the real number, so the accurate value may be of 7-8% in case of village bank credit and 10-15% in case of solidarity groups and individual microcredit.

Naturally, smaller and younger MFIs are more affected than older and bigger players are. According to CGAP survey⁴⁶, 64 percent of small MFIs (Tier 3) have reported funding problems in past six months in comparison to only 35 percent of large MFIs (Tier 1). Small and medium MFIs seem to be more fighting with liquidity issues – 74 percent of managers of MFIs from Tier 3 segment have expected that their liquidity situation will worsen in the next six months. Regionally, the most pressing needs for capital appear in Sub-Saharan Africa and South Asia – 68 percent and 57 percent of MFIs, respectively, reporting the liquidity problems⁴⁷.

The impact of the crisis on microfinance sector will also differ by *geographical location* of MFIs. The location of MFIs is important factor because of economic, regulatory and country-specific conditions influencing development of MFIs. The governments' measures could help but also hurt MFIs. The risks of government interventions include interest-rate ceilings, mass loan forgiveness, encouragement of delinquent borrower associations and development of credit programs in government agencies that lack financial expertises and so on. Some of these tactics could be already observed in several countries of Latin America (Gonzalez-Vega/OSU cited in CGAP, 2008). On other hand, the government interventions could encourage the transformation of MFIs in regulated subjects able to mobilize deposits or adaptation of cautious, better, lending policies.

⁴⁶ See later.

⁴⁷ According to surveyed MFIs' assets, they were distributed in three groups: Tier 1 – assets above US\$ 50 million, Tier 2 – assets in range of US\$3 million – US\$ 50 million and Tier 3 – assets below US\$ 3 million.

According to separation by regions, we can analyse impact of crisis on MFIs in particular segments – *East Asia and the Pacific, Latin America and the Caribbean, Middle East and North Africa, Eastern Europe and Central Asia, South Asia and Sub-Saharan Africa*. In March 2009, CGAP surveyed over 400 MFIs from all regions to identify present impacts of crisis⁴⁸. According to this survey and with great support of Tomáš Hes, we can analyse what has happened recently.

7.3.2.1 East Asia and the Pacific - EAP

The region was hit relatively hard by the food crisis, although many economies in region are specialized on agriculture. In 2005-2007, the food prices increased by 12.4% in rural areas and 13.8% in urban areas, the number of poor people increased by 4.9% in rural areas and 6.3 in urban ones (World Bank GEPs, 2009). The microclients are thus spending higher share of their income on food and basic goods. Savings are decreasing – savings replaced by basic consumption. Female microlenders are probably hit harder than in other regions, they should work more and harder, eat less to be able to feed their families. Logically, people working in export-oriented businesses, construction and tourism are significantly affected.

The growth of economies is slowing down – 8% in 2008 and 5.3% in 2009, but will be probably higher than in the rest of the world, mainly driven by China (World Bank, April 2009). According to list of fastest growing microfinance markets publicized in MBB no. 17, Autumn 2008, the Philippines, China, Indonesia and Cambodia are among top 20 for 2006-2007⁴⁹.

According to CGAP, 77% of DFI loans to MFIs are denominated in hard currency. The investment flows still does not stop – four international investors provided capital injection of US\$ 5 million to Bank Sri Partha, Indonesia in April 2009. Korea postponed the implementation of the Basel II from January 2009 to 2010 because of remaining capital requirement low and thus ease liquidity. Moreover, the Korean government promised to provide almost US\$ 73 million in direct loans and guarantees to micro and small businesses in financing troubles (Watson, 2009).

⁴⁸ CGAP asked over 400 MFI managers in different regions. LAC – 114 MFIs, MENA – 29 MFIs, SSA – 115 MFIs, SA – 59 MFIs, EAP – 26 MFIs, ECA – 44 MFIs. Around 76 percent of respondents were institutions of Tier 2 or 3, assets below US\$ 50 million. Credit unions and cooperatives represented 14.5 percent of sample. The survey was publicized in May 2009.

⁴⁹ The MBB publicized list of countries which have aggregate growth in borrowers above the 20 percent global median.

Although, most MFIs – 69% - has reported deterioration of loan portfolio quality, in EAP region is the ratio lower - 58% - with expectation of decrease in next 6-12 months. The portfolio has declined or stagnated in two thirds of cases, but predictions for next months are positive. Half of respondents recorded limitations because of liquidity contraction.

7.3.2.2 Eastern Europe and Central Asia - ECA

The ECA region seems to be most affected by the crisis. The crisis caught many countries of region in very vulnerable position caused by relatively high current account deficits, elevated external debt levels, very rapid credit growth and consumption boom financed by foreign borrowing. In addition, the highly leveraged microfinance market is really exposed to troubles of less liquidity and refinancing risk. According to CGAP, 84 percent of DFI loans to MFIs are denominated in hard currency. Fortunately, multilateral funders – EBRD, EIB and WB – promised to provide up to US\$ 24.5 billion as support for banking sector for funding businesses in the region. Good news is that Tajikistan, Azerbaijan, Bosnia, Kyrgyzstan, Kosovo and Armenia belong among 20 fastest growing microfinance markets worldwide⁵⁰. On the other side, the real incomes steeply declined due to currencies depreciation in second half of 2008 – 30 % for Hungary, 40% for Poland, 25% for Turkey and 70% for Ukraine. Number of poor and vulnerable people is expected to rise by about 5 million people for every 1 percent decline in GDP (CGAP, 2009).

According to CGAP survey, the microclients of this region appear to be most affected where the urban clients seem to be more affected than rural ones. The unemployment is increasing, remittances decreasing, profits of microentrepreneurs going down – all these factors lead to repayment difficulties higher than in other regions. 87 percent of surveyed MFIs answered that their PAR +30 has increased in last six month. And more than half of respondents reported that their gross loan portfolio went down in last six months.

7.3.2.3 Latin America and the Caribbean – LAC

According to IMF, eight of twenty developing countries whose economies have reacted most sharply to economic deterioration – measured by exchange rate depreciation, increase in spreads and equity market declines – are situated in LAC region. Some

⁵⁰ Where Tajikistan is the first in the list, Azerbaijan the second, Bosnia fifth and Kyrgyzstan sixth.

countries of this region are among the countries with highest developed microfinance markets and have been the cradle of commercial microfinance. The exposure to currency volatility is high – 73% of DFI loans to MFIs are denominated in hard currency. These could be two of reasons why the crisis has hit hard this region. On contrary, Mexico and Bolivia successfully have resisted the deteriorated economic conditions. Moreover, Mexico and Haiti are among 20 fastest growing microfinance markets worldwide. In first quarter of 2009, Mexican Banco Compartamos reported net profit of US\$ 21.9 million and 44,000 of new clients in its portfolio.

Microclients in this region are hardest affected by crisis, by high and volatile food prices, after ECA region. The repayment capacity is lower, the business activity and volume of remittances from abroad are decreasing – according to WB's outlook the annual percent change will be in range of (-4.4,-7.7) in 2009, increasing again in 2010. Two thirds of respondents answered that clients in urban areas are most affected. Together with women, they are facing to more repayment difficulties – three quarters of respondents indicated that their clients have problems with repayment. 71 percent of respondents reported increase in PAR +30 in last six months.

7.3.2.4 Middle East and North Africa - MENA

So far, MENA region has been less exposed to the impact of global crisis. Many economies in region are growing, rate of unemployment is stable in the most of countries and local banks are still not facing liquidity troubles. MFIs are also less affected, partly because of the fact that investment in microfinance sector is largely driven by DFIs and there is only low exposure to currency volatility – 16% of DFI loans to MFIs are denominated in hard currency. The growth of region is expected to decline from 6% in 2008 to 2.5% in 2009.

The microclients are significantly less affected by crisis than in the rest of the world. Lower segment of clients have not experienced any drastic economic slowdown yet, only less willingness to expansion and credits from bigger borrowers (CGAP, 2009). In period of 2005-2007, food prices increased by 25.9 percent in rural areas, and by 12.5 percent in urban areas. Securing food expenditures remains priority but it is less problematic than in other regions, namely in comparison to the rest of African continent. Only Morocco seems to be seriously affected, but not only from reasons directly related to the crisis.

Microfinance sector seems to be quite healthy, due to the fact that many MFIs in region operate in highly regulated financial markets. MFIs in region have highest equity to asset ratios of all regions and Morocco and Egypt depend among 20 fastest growing microfinance markets worldwide. 67 percent of respondents reported that they had not to face any liquidity constraints in past six months. Gross loan portfolio has increased in 46% surveyed MFIs and 62% MFIs reported increasing of PAR +30.

7.3.2.5 South Asia – SA

In 2008, GDP growth rate in SA region decreased substantially to 6.3 percent from 8.4 percent in 2007. Even before the crisis, the region was affected by rising inflationary pressures and tight credit conditions. The banking sector has been rather isolated from effects of crisis as its exposure to toxic assets has been very limited, the exposure to currency volatility is low - only 18% of DFI loans to MFIs are denominated in hard currency.

Disturbing fact is that large proportion of the region's population is poor and thus highly vulnerable to changes in credit availability. The higher prices of food force microclients to spend more of their income on substantial food, their savings capacity is decreasing. According to CGAP, 10 percent increase in food prices would lead to estimated increase of 4.4 percent in poverty headcount in urban areas and 1.7 percent in rural areas.

As export and capital spending have languished globally, demand in export is falling down also in this region. Thus, the microclients depend on income from export-oriented sectors (i.e. export of tea, rubber, garments) are affected most. Because of falling external and domestic demand, there have become more difficult to obtain trade credits for exporters and loans for households. According to CGAP, defaults of non-financial firms in area could climb to 20 percent in 2009, in comparison to expectation of 4.2 percent year earlier.

Concerning microfinance, India, Pakistan and Afghanistan are among the 20 fastest growing microfinance markets worldwide. Moreover, Indian initiatives to increase liquidity and lower foreign exchange risk have made difficult to crisis affected the microfinance sector. According to Watson, the Central Bank increased foreign lending restrictions for non-bank financial companies where many of them are MFIs, let the rupee depreciate to slow the outflow of capital and has been providing extra funding for financial

sector. The overall impact of crisis on region has been limited until now, also because of proactive measurements of governments like these in India.

7.3.2.6 Sub-Saharan Africa – SSA

Although SSA region is the developing region least integrated into global economy, growth is supposed to fall from 5.5 percent in 2008 to 1.7 percent in 2009. Many of the poor were already hit by recent increases in food prices and sharp declines in remittances to the region from abroad. Even though some countries as Senegal have experienced rise in remittances.

Due to high food price volatility – i.e. food staple price inflation is 40 percent in Kenya and 27 percent in Zambia, the share of income spent on food is also increasing. According to Global Economic Prospects 2009, the 10 percent increase in food prices would lead to estimated increase of 2.8 percent in poverty headcount in urban areas.

Because of strong saving base, the microfinance sector in SSA is less dependent on international capital and donors' money. The levels of deposits are high especially in countries of Western Africa. There is only moderate exposure to currency volatility – only 31 percent of DFI loans to MFIs are denominated in hard currency. Moreover, only small part of MFI debt is priced at commercial rates.

The shortage of demand for microentrepreneurs' products and higher prices of basic inputs have severe effect on microclients. The clients are facing to decreasing savings because of more money spent on food and thus increasing difficulties with repayments. Clients of smaller NGO MFIs are often not allowed to mobilize savings, thus they appear to be more affected. 67 percent of respondents reported that PAR +30 has increased in last six months.

Only Togo and Kenya are among the 20 fastest growing microfinance markets worldwide. According to Watson, key problem of MFIs in Kenya is repayment rate. One of MFIs, Jamii Bora, has seen increase in non-performing loans due to lower sales of clients' businesses. In May 2008, the Kenyan government implemented Kenyan Microfinance Act which enables to regulated MFIs accept clients' deposits. It could be expected that these deposit taking MFIs survive better the crisis.

7.3.3 Recommendations for Survival of the Crisis

7.3.3.1 Recommendations for MFIs

“In order to survive the crisis, MFIs have to cut costs dramatically, banish dividend payments, eliminate any unnecessary spending, focus on quality of service rather than expansion in order to prevent bad debt and tighten the credit analysis, so that quality of loyal debtors is preferred to short term growth. In addition, the treasuries should keep creating financial reserves, as the impact of the crisis may be long-lasting and protracted. Areas of higher competition and overindebtedness should be avoided for expansion. In a few words, MFIs are to embark on state of alertness and cost optimisation with all what it represents. Those entities, that depend on a few sources of funding may have to incur in more intense search for other springs of finance or look for alliances with other players, if there funding is visible threatened.”

Tomáš Hes, in interview

Concretely, in case of *dealing with liquidity contraction*, the MFIs should focus on developing of local funding and mobilization of local deposits. As we mentioned before, they should diversify their funders – not depend only on one, not diversify too much. Those borrowing in foreign currency should hedge their loans, i.e. by buying currency swaps.

Concerning mobilization of deposits, Judith Brandsma from the World Bank warned that the using of people’s savings as source of funds hides several dangers – the savings are other poor people’s money, savings are all about confidence and savings are firstly service and secondly the source of funding. The mobilization of savings requires new set of skills, systems and procedures. Decision to mobilize savings should not to be taken without prudence.

The MFIs should aim to *increasing loan portfolio monitoring* and focus rather on *portfolio quality than growth*. They should cut the number of consumption loans as salaried clients seem to be more affected by crisis. In addition, the sizes of loans could be reduced. The agents should try more to keep clients’ confidence and loyalty. They should

be training about current situation – not being aggressive in lending; spending more time with customers to understand their needs, to make better qualitative and quantitative analysis before making decision.

Very important item is that MFIs should keep their purpose of existence – helping the poor from poverty. MFIs should ensure the clients that the loans will be available for them also in future. Even though the MFIs will want to be more conservative in lending, they must guarantee following loans for existing borrowers who have repaid faithfully. Otherwise, as we said before, the repayment motivation will probably decrease, and thus the repayment rates.

Small and medium sized MFIs should also consider the possibility of *consolidation*. In case of lack of liquidity, the consolidation or merger could be the best solution. The background of older and/or bigger MFI could solve problems caused by liquidity crunch in the easiest way. Another MFIs may also choose to focus again on their basic lending activities – small lending for establishing the businesses. They may quit consumer loans or lending to SME, or tighten service and product portfolio.

According to CGAP survey, as the funding costs are rising, the MFIs need *to cut their costs*. 23 percent of respondents reported that they cut their stuff to adjust costs. On the other hand, MFIs are trying not to pass the costs to their clients. Thus, the 61 percent of surveyed MFIs reported no changes in their lending rate to clients, moreover 9 percent of respondents said that they have lowered their rates.

7.3.3.2 Recommendations for Donors and Investors

In the short term, the funders should *stay helping to MFIs* facing liquidity problems – by rescheduling their loans, recapitalization or providing emergency funding. These emergency funding should be only short term and used as the last possibility, otherwise this could cause the push out of local sources or create disincentives to deposit mobilization. Logically, more funds in local currency lower exposure to currency volatility.

Oikocredit has already taken some measures concerning MFIs such as scaling down their commitments towards MFIs, especially the top-tier ones that have not been their long-time partners yet, lowering the average amount per transaction, increasing monitoring efforts or cutting of new investments in geographical expansion (Microfinance Lunch

Break, 2009). On the other side, public investors should focus on MFIs from Tier 2 or Tier 3, which are relatively underserved and not so able to attract private investors as MFIs from Tier 1.

In the long term, the funders could *support the mobilization of local funding*, also through special instruments such as partial credit guarantees. In addition, they could help to MFIs with diversification of their funding – dependence on one source is bad as well as costly wide range of funders. Important thing for many MFIs for future is their progress in licensed institutions able to mobilize deposits; this development should be encouraged a lot.

Non-financial help could be provided in form of *strategic and operational support*. The key areas of need include training in market risk analysis, enhanced credit risk management techniques and support in strengthening back-office informational and financial systems (Watson, 2009).

7.3.3.3 Recommendations for Policy Makers

There is problem with governments' reactions – they should *not be too cautious or they should not overreact*. Both these cases could worsen the situation. It is understandable that policy makers are cautious but measures, such as *restricting new licenses for deposit taking or limiting branch expansion*, may rather limit access to finance when no additional financial support is available.

Otherwise, stimulation of access may disappoint when governments focus too much on *immediate cure of financial system*. The loan forgiveness, subsidized lending or given interest rates could hurt sustainability of financial system in long-term period.

As well as funders, governments could try to *support the progress of MFIs* to become regulated institutions accepting deposits. In commercial financial sphere is normal that peoples' savings are under deposit protection, some kind of deposit insurance. This should be obvious also for poor savers.

8. Conclusion

Approximately 1 billion people – *nearly one-sixth of the world's population* – live with income lower than US\$ 1 per day. 162 million people of them survive on less than US\$ 0.5 per day. Thus, the MFIs cannot be afraid that they will lose their clients. Otherwise, in current time of crisis maybe others, called nearly poor, cross the poverty level. The microfinance sector has estimated customer base of *more than 66 million borrowers globally* and total assets of more than US\$ 35 billion at the end of 2007 (MixMarket, 2007).

As we said, the original idea of *microcredit* was just in the extension of small amounts to very poor, often unemployed people without any collateral, to help them live better. Just small credits can help these people to repay their previous loans and start their own profitable business. The amount of credit is smaller and the credit cycle is shorter than commercial loans with frequently paid instalments. Through the years, the poor microcredit system has developed to *microfinance system*. This system includes not only lending to the poor but also other financial and non-financial services. The most MFIs connect their credit services with educational or saving programs or business trainings, retraining scheme or technical trainings.

As the poor is indicated as non-bankable because of their low or no income, no steady employment, no collateral and no credit history, they have little possibility to obtain loans from commercial financial institutions. Despite of these facts, the potential of credit markets in developing countries is high. Potential microentrepreneurs are usually missing starting seed capital, but the returns on certain small businesses are fairly high. The returns on businesses in agriculture and trade can be above 100% annually (Mexico, Ghana, Kenya).

The problems of *information asymmetry, adverse selection and moral hazard* are partially solved by non-commercial lending institutions as ROSCA and credit unions, as well as local moneylenders, which are quite accessible for the poor. Already, ROSCAs exploit the principle of group lending with joint responsibility. However, the microfinance system added much more advantages.

Group lending mechanism can reduce risk of default, risk of moral hazard as well as can solve the problem of adverse selection. Successful creation of *dynamic incentives* and *additional services and products* to offered credits have same importance. Confidence, loyalty and dynamic incentives are created through the long-term relationship between bank and client. The *frequent small instalments* and regular meetings help clients to learn how to save regularly, to give them possibility to repay some instalments from their households funds if they are in trouble or to identify potential areas of troubles in advance. Moreover, this also reduces the risk of default.

As the first microfinance institutions can be identified *Irish loan funds* in 18th century. However, the MFIs have brought themselves in public notice in 2006 when Mohammad Yunus, founder of *Grameen Bank*, was awarded by Nobel peace prize. However, his MFI as well as the others have already existed for more than three decades. Thus, 90 percent of present microfinance activities take place in Asia. *Bangladesh and India* are the countries where the microfinance development began and spread abroad. Big follower is Latin America - especially *Mexico*.

The microfinance sector has grown substantially from its birth, about 40-50 percent yearly in some areas. Until now, this sector has been known for its successful management leading to *high double-digit growth rates*; good asset quality; its particular funding profile including public and private, socially motivated funders and relative isolation from global happening.

But with the growing and aging of MFIs, increasing competition and commercialization, some institutions forgot the *initial purpose of their existence*. They have focused more on not so poor clients such, SMEs, have increased the loan amounts, decreased the number of the poor clients in order to profit more. Smaller number of bigger loans cut the average costs but it often means *less outreach* to the poor. Otherwise, many MFIs are staunch to their social mission and their *impact is unquestionable*. The wider effects of microfinance include i.e. change in women's empowerment, use of contraceptives, and knowledge of better nutrition, education or increase of wages. However, some of these outcomes, especially those intangible, can be difficultly measurable.

This laudable sector has been exposed to the big testing in times of *financial crises* – as that in Asia and Latin America in 1990s but also current global crisis. Through the

Asian crisis, the mostly affected countries were Thailand and Indonesia. The MFIs and their clients of the region suffered a lot from deteriorated financial conditions – more expensive and less available funds, increasing operational costs, declining loan portfolio, changes in sustainability, increasing interest rates and lower sales of microentrepreneurs leading to decreasing repayment rates. Despite of this, MFIs performed much better than commercial financial institutions.

When the Asian crisis spread over the world, in years 1998 and 1999, it reached also shores of *Latin America*. The mainly affected countries were Argentina, Brazil and Mexico. As the MFIs were not immune to the economic situation in Asia, they were not in Latin America, but after years, we could say that *well-established MFIs performed better* than their counterparts in the commercial part of banking sector did. For example, in terms of growth the leading MFIs of Bolivia, Colombia and Peru have outperformed countries' commercial banks every year since 1997. After hard times in 1998 and 1999, the portfolio growth of MFIs reached substantially high level in 2000 – 47.9 percent in Peru and 26.8 percent in Colombia. At the same time, although growth of commercial banks' portfolios also improved slightly, still they reported almost no growth.

The *present global credit crisis* caused by subprime mortgages is other great test of sustainability of microfinance sector. In comparison to preceding crises, microfinance has now *many more links to domestic and international financial markets*, thus the results of today's financial crisis is more likely to more effecting. The effects of present crisis are likely to be more complex, deeper and more difficult to predict than in case of past financial crises. One thing can be clear, in medium and long-term the worldwide recession will affect much more poor people and moreover will create the new poor from the “reserves” of so-called nearly poor. According to the World Bank's estimate, the worsening economic conditions could push additional 65 million people under the US\$ 2 per day poverty line.

This year will be a key year to test the *resilience of microfinance* to macroeconomic turmoil, but from the recent events, we can estimate what can happen next. The size of impact depends on several factors, such as *structure of institution's liabilities, institution's financial state, economic health of clients or geographical location*.

The *mostly affected MFIs* will be those smaller, poorly administered and those that depend only on few sources of external funding. Loans in USD or EUROS have caused

problems due to rising FX risk and may induce bankruptcy of those MFIs, which will not be able to service their debts. The regulated entities that accept deposits will surely have stronger position in comparison to those dependent on loans from development banks or foreign funding.

The higher prices of food and energies and also lower remittances from abroad have caused *high withdrawals and lower repayment ability of clients* or even loss of confidence of clients in MFIs and thus incentives to meet their liabilities. The delinquencies, measured by PAR +30 and PAR +90, have been risen through the last two years. PAR +30 has risen from wonderful 1.8 percent to 3.8 percent, which is really high by microfinance standards (FitchRatings, 2009). According to IFC data, the PAR +30 has already increased from 1.2 percent before crisis to 2-3 percent. In some areas, the numbers could be even worse. Still, it is very low in comparison to commercial sector.

The impact of the crisis also differs *geographically*. The location of MFIs is important factor because of economic, regulatory and country-specific conditions. The mostly affected regions seem to be ECA and LAC. Both regions are highly exposed to troubles with liquidity and refinancing risk, when 84 percent and 73 percent of DFI loans, respectively, are denominated in hard currency. Moreover, eight of twenty developing countries whose economies reacted most sharply to economic deterioration are situated in LAC region. People of both regions were hardly affected by highly volatile food prices.

In general, the *growth of the microfinance* sector has been halted and is predicted to reach low double-digits or high single-digits. This numbers have been visibly lower than in the past, when the growth attained record numbers. The major players with more than 50,000 clients may even profit from this situation as there will be less competitors and new opportunities as well as new market's segments will open.

Thus, in order to *survive the crisis*, MFIs should cut costs, eliminate unnecessary spending and/or focus on quality of portfolio rather than expansion. In dealing with liquidity issue, they should diversify their sources of funds – not too much, not only one. Diverse financial market instruments should hedge the borrowing in foreign currencies. Non-deposit taking MFIs should consider the progress toward regulated institutions able to mobilize savings.

The MFIs need to keep their *initial purpose of existence*. They should still “be there” for clients, spending more time by qualitative and quantitative analyses before lending, be conservative in lending and guarantee following loans to existing borrower with no repayment problems to avoid loss of incentives to pay. MFIs, which provide lending also to SMEs, consumer loans or have wide service and product portfolio, may focus again on basic lending activities – to provide working capital to the poor. Small and medium sized MFIs dealing with liquidity problems could also consider the possibility of consolidation. The connection with older or stronger institution could be the best solution for many.

However, as we said several times, the main test of resilience of microfinance system to current global economic events will come *during this year*. The overall and verified data will be hopefully available at the end of year or beginning of the next one and we will be able to say whether the microfinance sector prevails successfully over this crisis like in the past. The MFIs are much more connected to international financial market than before. The impact of the crisis has already appeared in tightening of capital sources and lower demand for product of microentrepreneurs. Nevertheless, microfinance sector is known for its adaptability in past crises. Whether its resilience is still such, only coming events show us.

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Appendix

Table 12: Savings data

Savings						
Distribution of savings accounts (USD)	0-100	101-300	301-500	501-1,000	1,000+	Total
Number of accounts	995,209	147,397	56,165	46,731	73,713	1,319,215
% of total accounts	75.4	11.2	4.3	3.5	5.6	100
Total savings (USD millions)	20.8	26.2	28.0	42.3	457.8	575.1
% of total volume	3.60	4.60	4.90	7.40	79.60	100.00
Average account (USD)	21	178	498	905	6,210	436

Source: WOCCU

Table 13: Loans data

Loans				
Distribution of loans (USD)	0-400	401-1,000	1001 +	Total
Number of loans	117,190	140,223	198,602	456,015
% of total loans	25.70	30.70	43.60	100
Total volume (USD millions)	42.2	141.2	519.6	702.9
% of total volume	6.00	20.00	73.90	100
Average loan size (USD)	360	1,007	2,616	3,983

Source: WOCCU