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**The Poor and their Risk
How to alleviate Poverty by reducing the
Impact of Hazard?
The MicroInsurance Promise.**

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*À mes parents
À mon frère*

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EXECUTIVE SUMMARY

"The time for the harvest would come and with it the season of hope"

D.Lapierre, "City of Joy"

The spread and particular characteristics of poverty point out ‘risk’ as a recurrent and determinant aspect in the life of the chronic and transitory poor. For our research, we focus mainly on rural, mass poverty, which encloses about 70% of the poor. Through this, we also address urban poverty since the rural type greatly influences the latter. We have learnt that economic growth may significantly help to alleviate poverty but that it needs to be agriculture-led in the poorer continents. Thus, improvement in agriculture productivity in the developing countries will substantially alleviate rural and urban poverty, reduce inequalities and enhance social and economic growth. One major difficulty encountered in the promotion of agriculture is the occurrence of climatic risk. The dependence of the poor on agriculture makes them very vulnerable to the impact of natural hazards. Because of this, a strategy that could reduce the impact of this hazard would be particularly useful for reducing poverty.

Microcredit is a growing and successful development tool that provides small loans for people who cannot get loans from banks (Sadoulet, 2002). It uses very **particular mechanisms** to ensure repayment despite information asymmetry and absence of collaterals: group lending, progressive lending, regular repayment schedules and collateral substitutes. However, microcredit, along its poverty reduction mission, faces several **challenges**. Access to credit needs to be scaled up. This should be possible by expanding other financial services such as savings and collateral substitutes. But there is also a clear opportunity for microfinance organisations to enter into new relationships with private companies that possess both, the right motivation to address the bottom of the pyramid and sufficient resources, for scaling up their credit activities. A strengthened link could also result in a better outreach and higher discipline for the microfinance institution. A broadened resource base achieved through a broader client base or/and wider product and service range may then support capacity building of the institution and ease sustainability. There is no single solution though, and the private sector is not necessarily the panacea for the poor.

Microcredit presents considerable **strengths**: cost effectiveness, powerful leverage effect of donors’ and state funds, potential financial sustainability. Microcredit has a positive *impact* on income and reduces vulnerability. Children’s education, health outcomes of women and children, free labour, and empowerment of women are some important results of microcredit schemes (J. Murdoch, 2002). However, **weaknesses** need to be addressed to improve microcredit as a poverty reduction tool. It is not universal enough (e.g. times of crises,

displaced populations etc.), creates indebtedness problems for those who cannot repay regularly because of cyclical or single source incomes and it sometimes results in unhealthy social pressure.

Further, the **outreach** of the service is still too limited. We noted three different problems related to outreach and risk. First, too often the poorest have no access to financial services. This is caused either by self-exclusion, by assumptions of other borrowers and lenders (social exclusion) or by misconceptions of the financial product. Often their income sources are not certain and diversified enough in order to assure them a certain level of stable earnings necessary to make weekly repayments. Second, when the *poorest* do have access and take part in microcredit programmes they seem to receive few direct benefits for the increase of their income. This is because microcredit enhances the risk of these borrowers (indebtedness spiral), although it reduces risks of the better-off borrowers. *Consequently, for the poorest, the impact of hazard becomes more important if the hazardous event occurs*, unless they use the credit to confine themselves to low-risk low-return activity that will not increase their income. Third, the benefits of reduced vulnerability that some of the poor receive indirectly could be provided more efficiently (directly) through cheaper alternative strategies.

Finally, microcredit has taught us that poverty alleviation strategies should be demand-driven, starting with the poor, going beyond commonly accepted ideas, leveraging third parties (NGOs) and continuously innovative, because no single model offers the eternal remedy.

There is an unjust paradox that the poor are the most vulnerable to hazard but have little or no access to efficient risk management strategies. We found that the **risk management** process of the poor has to be transformed or completed by giving access to new opportunities. In this way the poor become more empowered through the possibility to make choices. **Microinsurance** could be such a new opportunity. It is a system that protects poor people against specific shocks, using risk pooling, in return for regular affordable premium payments proportionate to the likelihood and cost of the risk involved. Although insurance is much cheaper for risk reduction purpose than credit and savings, the risk pooling seems inefficient for covariant risks. Financial innovation can remedy these systemic covariant risks limitations, except maybe for the biggest catastrophic risks occurring every 50-100 years that should still be covered by governments.

Three aspects explain the emergence of microinsurance. First, there are gaps in *informal insurance*: (1) the lack of access for women and the poorest since they are often socially excluded and cannot rely on family resources, (2) the high costs for the poor and their community, (3) the lack of efficiency, and (4) the impact of aggregate shocks affecting all the

insured members of a group-based mechanism simultaneously and making informal insurance ineffective.

Secondly, *conventional insurance* also show some limitations: (1) lack of supply towards the poor due to wrong assumptions, (2) non-adapted supply causing high costs for the customer (transportation costs, no clear information) and for the insurer (high information asymmetry).

Finally, providing microinsurance to the poor arises from weaknesses of *microcredit and savings models, on the demand side*: (1) access or outreach for the most vulnerable, the poorest (see above) (2) indebtedness risk but the bottom-down poor do not have as much risk management opportunities. They will adopt low risk-return profiles in order to manage their credit risk. (3) Covariate risks result, for the poorest as well as for the better-off poor, in an indebtedness spiral since group-based informal mechanisms (e.g. family solidarity) are useless due to the aggregate nature of the shock, (4) credit and savings are far more costly for the clients for the protection of certain risks. *On the supply side*: (5) regular repayment schedules face difficulties with seasonal and single source incomes. The problem is particularly sharp for rural credit. (6) group-based credit schemes discourage voluntary savings because of the potential repayment problem of the members.

The benefits of microinsurance for the insured are: (1) protection of his financial (stable incomes), social (family) and human (e.g. education) capital, (2) access to credit and savings if previously unbankable, (3) the opportunity to choose high risk-return activities with covered risk, (4) empowerment, (5) reduced production cost (agricultural and industrial), (6) dignity recovery, (7) leveraged informal mechanisms. But microinsurance benefits to *all the poor* not only the insured. The costs for the insured are few: premium, claim settlement, risk of collapse of insurer, basis risk.

The benefits and costs for microfinance institutions (full service model) need also to be evaluated. Benefits are: (1) mission achievement, (2) scalability thanks to improved sustainability and outreach of microcredit and savings programmes, (3) a broadened resource base and capacity building, and (4) leveraged donors' and state funds. The costs are heavy: (1) management of a different risk structure, (2) acquisition of competences and resources, (3) basis risk (risk of too much compensation), (4) loss of focus, (5) potential cannibalisation, and (6) compliance with regulation (e.g. capital requirements). MFIs also put at risk the capital and confidence of the poor. Such organisations are often still vulnerable and should be careful to not sacrifice their credit and savings that already contribute to poverty alleviation.

The costs and risks are very high for an MFI to build up its proper microinsurance activities for correlated risks. Out of five *provision models* it is the *partner-agent model* (private

partner supports insurance risk, agent sells the product) that outsets sufficiently the high costs, although basic products (e.g. life insurance) are good candidates for the full-service model.

The *case study of BASIX* confirms the theoretical findings and illustrates how innovation, adapted provision and local research can make microinsurance work for the poor by reducing the impact of hazard on their lives, in a hostile environment where the public sector (with inefficient and costly crop insurances) and nature are major trouble shouters.

BASIX is a leading Indian MFI promoting livelihoods of the poor, including rural poor, through the provision of financial services and technical assistance. Krishna Bhima Samruddhi (KBS) Local Area Bank, a subsidiary, launched in 2003 an innovative rainfall-index insurance in partnership with ICICI Lombard, a major private insurer who bears the risk and developed the actuarial models. The insurance is linked to the underlying systemic risk – drought – defined as an index that measures rainfall recorded at a regional level (local weather stations), rather than to the extent of the resulting loss in crop yields. The rainfall index insurance is derived from a European put option structure where the option price is the cost of the coverage and the strike is the rainfall threshold below which an indemnity is triggered. The rainfall insurance does not suffer from the usual moral hazard, adverse selection and high administration cost problems of traditional crop insurance, and it is therefore better suited to serve small farmers (P. Varangis, 2003). Although the impact is difficult to assess in the first months, current customers¹ in the district of Mahabubnagar (Andhra Pradesh) are very enthusiastic, full of hope and anticipate already the effectiveness of the policy in case of drought by increasing savings and planning future investments.

Quite a lot of challenges need to be addressed (minimizing basis risk, precise actuarial model, independent large scale measurement, education to insurance, partner-agent relationship management, outreach to the poorest) but we find that KBS should be able to scale up the distribution, improve outreach and still ensure fast claims settlement. Then, the promised benefits² will become a reality in every day life of many rural poor.

Microinsurance is promised to become a widely used service, not only for covariant risk. This evolution entails changes for other parties of including *microfinance rating agencies*. The cases of MicroRate, Planet Rating and M-CRIL confirm the differences between microfinance and conventional raters in terms of evaluated risks, funder's motivation, purpose of rating and resources. Raters agree that, when they will encounter microinsurance in their evaluations, necessary adaptation will be implemented³. In the case of a full-service model, the MFI has an increased credit risk and a new basis risk, and is more exposed to demand risk, fiduciary risk

¹ Informal interviews have been carried out with small farmers that purchased the rainfall insurance.

² Benefits for the poor and for the MFIs detailed earlier

³ Information gathered in a brief questionnaire sent to the discussed rating agencies.

and to mistakes in design. In the case of a partner-agent model (e.g. BASIX), mistakes are minimized but the mission of the MFI becomes dependant on the partner's will.

The *implications* of these changes for microfinance rating agencies are threefold: First, the *determinants* of the evaluation procedures need to be modified. The portfolio risk and basis risk components of credit risk should be measured and receive more weights. Human resources, competences and skills, and information systems should also gain in weight. And contract analysis becomes necessary in case of partner-agent model. Second, the rating must take into account the *cyclicalities* of MFIs' performance and risks due to the transfer of the cyclicalities of the poor (e.g. weather risk). Third, the *raters' resources* must be broadened or adapted to the growing complexity of organisations and services to which microinsurance contributes. New expertise should be acquired either by training of unqualified employees, or by external consultants or partnerships with resourceful qualified institutions. These three implications of microinsurance are not exhaustive but represent future challenges for the microfinance rating agencies if they want to continue their mission of transparency, access to capital and MFI's capacity building along the microfinance evolution.

In conclusion, we demonstrated that microinsurance does alleviate poverty by reducing the impact of hazard in rural areas. It protects the clients from risk, reduces MFI loan default, and earns additional income for the MFIs, enhancing outreach and scalability. The case of rainfall index insurance at BASIX illustrates that the success of microinsurance depends highly on its implementation, on the organisation's capabilities and thus on the people who evaluate the organisations. Only then, the promising benefits will be reality for the poor.

Microinsurance is thus a useful complement to, rather than a substitute for, savings and credit in protecting the poor against risk and allows them to retain and develop financial, social and human capital in the long term.

INTRODUCTION

"We will spare no effort to free our fellow men, women and children from the abject and dehumanizing conditions of extreme poverty, to which more than a billion of them are currently subjected. We are committed to making the right to development a reality for everyone and to freeing the entire human race from want."
(United Nations Millennium Declaration)

This dissertation aims to be one relay among others of the United Nations Millennium message. Starting from the premise that the life of the poor is central to the message of this paper, we will try to meet the five key objectives of the UN for the Year 2005, year of microcredit:

1. Assess and promote the contribution of microfinance to Millennium Development Goals
2. Increase public awareness of microfinance as a vital part of the development equation
3. Promote inclusive financial systems
4. Support sustainable access, and
5. Encourage innovation and new partnerships.

As the United Nations represents our countries led by the governments we have elected, it is also our responsibility to make these declarations a reality for and with the poor. However, the objective of this study is not to present microfinance as the ultimate or unique solution because this is far from being the case. It must not put into shadow other development imperatives such as primary education, health, peace, freedom of speech, etc.

To relay the Millennium declaration the study will seek an answer to one particular question: How to alleviate poverty by reducing the impact of hazard? In a second phase, we will examine whether microinsurance is a promising solution for this question. But prior to the microfinance approach, a better understanding and awareness of poverty incidence is necessary.

The paper is divided into three sections. **Section 1** documents poverty through its dynamics and aims to give a clearer picture of its characteristics. An inherent factor of poverty, risk, is examined more closely. Poverty is then located spatially to assess where specific actions have to be undertaken. Understanding differences in types and locus of poverty is essential in developing adequate strategies to alleviate poverty efficiently over the long term. The last part of Section 1 details and analyses a specific strategy – microcredit – that receives particular and growing attention and seem to work successfully towards poverty reduction. The reasons of its success and efficiency are briefly examined. The weaknesses or current failures of

microcredit are also outlined and ways for improvements are paved to address unanswered needs of a sizeable part of the poor, such as exposure to risk or vulnerability.

Section 2 is the central part of this paper. It begins with the evaluation of the way in which microfinance can react to the problems of risk and hazard encountered by the poor and by microcredit. Secondly, we investigate whether microinsurance could offer a potential solution. The origin of microinsurance is examined by identifying gaps in informal risk management strategies, microcredit programs and conventional insurance schemes. Thirdly, the benefits and costs for the poor and for the providers of microinsurance are listed and weighted and different scenarios of provision are approached in order to finally find the answer to the question whether microinsurance could contribute to poverty alleviation by reducing the impact of hazard.

To confront theory with practice the case of BASIX, a leading Indian microfinance institution (MFI), will be highlighted, especially as a microinsurance innovator. Analyses are based on a broad literature review but also on formal and informal interviews with people participating in development issues, particularly in India. A visit to BASIX and to villages in Andhra Pradesh gave me the opportunity to meet and discuss with the staff of BASIX but also with microfinance clients and small local farmers. This visit and the interviews have certainly added much to my insight.

Section 3 deals with the implications for rating agencies of the emergence of microinsurance in MFIs. First, the basics of a microfinance rating are outlined. Then, the cases of three leading rating agencies are discussed. Finally, the underlying determinants of a rating in the microfinance sector are examined and remarks are introduced for their evolution towards the changes microinsurance has brought in.

Finally, the **conclusion** provides precise answers to the broad questions that have been raised in the three sections.

SECTION 1: RICH SOCIETIES IN A WORLD OF POVERTY: IS POVERTY INEVITABLY THE NORM?

Answering this question implies understanding every word used in it, especially the notion of ‘poverty’. Afterwards it will become possible to locate poverty and identify the norm. The word ‘Inevitably’ is the second crucial word that will be explained to clarify the question. Finally, we will be able to answer whether poverty is inevitably the norm, or not. Before that, it is indispensable to understand what is poverty and who are the poor.

CHAPTER 1. | What is Poverty?

One common way to describe poverty is to define it. Literature gives a broad range of definitions⁴ often depending on the context of the author or the purpose for which it has been established. Moreover, they often baffle the reader and introduce very little understanding for them. *Common sense dictates that poverty is a condition of having insufficient resources, income or the means to satisfy even basic human needs.* It is less obvious to deeply understand what that means. Instead of a definition, we will introduce differences and nuances to the intrinsic characteristics of poverty in order to ensure its profound understanding. As Kant pointed out:

“All cognition of things merely from pure understanding or pure reason is nothing but sheer illusion, and only in experience is truth.” (Prolegomena to any future metaphysics, p171)

Experience and observation have certainly taught one thing to poor and non-poor people, i.e. that being poor is an “unpleasant thing” with harmful effects for individuals and society. However, the possible difference of opinion between the poor and the rich lies in the depth of feeling on the subject. During our quest to find answers in the next sections we need to adopt a “worm’s eye view” (Trilochan Sastry⁵). That is to put oneself as closely as possible to the life and feelings of the poor, and ultimately to let the poor find solutions to the question “How can I escape poverty by reducing the impact of hazard on my life?”

A. What are the characteristics of poverty?

For the sake of clarity, I characterize poverty along two dimensions: distribution and duration.

Distribution of poverty – A first distinction can be made between the poverty that afflicts the few or, in any case, the minority in some societies, and the one that afflicts all but the few in other societies (Galbraith, 1979).

⁴ Appendix 1

⁵ Professor of Social Entrepreneurship at the Indian Institute of Management Bangalore, India

- **Case poverty**

The first kind is that of a poor individual or family in a predominantly wealthy community. Moral, genetic, familial, environmental, educational, racial, social or hygienic characteristics are here the cause of deviation from the general standards that rule in a particular society. Such persons can be the helpless aged, the physically or mentally handicapped or the chronically ill. This case poverty is of considerable importance. Fighting this kind of poverty is not an easy task as it often means to combat commonly accepted thoughts, for example that those that suffer have been punished by God and deserve their destiny

- **Mass poverty**

The second type of poverty called mass poverty, the type this study concentrates on, is present in communities where almost everyone is poor. In such cases wealth and affluence are the exception. Important to notice is that mass poverty is not always *generalized* but can also be *concentrated* in many relatively affluent countries where particular demographic groups are vulnerable to long term poverty⁶ (e.g. discriminated populations in developed countries).

Duration of poverty – Secondly, to improve the understanding of poverty, the notions ‘chronic’ and ‘transitory or transient’ have to be introduced (David Hulme, 2003).

- **The Chronic poor**

Those who suffer from poverty for many years, often for a lifetime, and who are likely to transmit their poverty to their children are chronic poor. They are the people who benefit least, or suffer most, from the current process of globalisation and policies for development and who are the most difficult to assist. As we will see they are found in poor and rich countries, remote rural areas and inner city slums. Social exclusion because of their gender, age, ethnicity, disability, caste, place of residence, profession or social position is part of their everyday life. Chronic poverty can be inherited from a child’s parents and is then “privately transmitted” poverty. Or it can be inherited from the wider community or society, “publicly transmitted” poverty (C. Harper et al., 2003 ID21; K. Moore, 2002). The chronic poor also experience common vulnerabilities based on a common place of residence (e.g. desert) or work (e.g. agriculture), and those who experience several vulnerabilities are more likely to be chronically poor (K. Moore, 2002).

We can locate the chronically poor in what Bird (et al., 2002) call ‘spatial poverty traps’, where the majority of people are extremely poor and local resources are extremely limited. Globally, these less favored areas (LFAs) include large regions in arid, semi-arid and remote

⁶ <http://www.tangatz.info>

Africa; the poverty square of east-central India (Orissa, Madhya and Andhra Pradesh); infrastructurally isolated and tribal parts of Bangladesh; mountainous areas in Asia and the Andes; Northern and Western China; and smaller poverty pockets elsewhere (such as regions in Haiti or Indonesia)

■ The Transitory or Transient poor

The transitory or transient poor are drawn from a much larger group of vulnerable households. Their poverty or extreme poverty is a temporary phenomenon. They manage to escape from the downward spiral of the poverty cycle but remain vulnerable to further impoverishment.

Baulch and McCulloch (2002) confirm findings from elsewhere in Africa and Asia that poverty can often be a temporary phenomenon. Most analyses of poverty use household survey data and focus on static, one-shot pictures of poverty. It would be more informative to assess what makes the people enter and/or exit poverty, in a dynamic model. The report of Baulch and McCulloch concludes by warning that it cannot be assumed that policy interventions that help the currently poor will also reduce the incidence of poverty. *To reduce incidence, action has to be directed also towards the vulnerable non-poor or not-so-poor.* However, targeting vulnerable groups requires better knowledge of the factors associated with movements in and out of poverty.

■ The Cyclical poor

This type of poverty can be widespread throughout the population but the occurrence itself is of limited duration, similarly to transient poverty⁷. The difference lies in the frequency and timing of occurrence that are both chronic in the case of cyclical poverty. This *permanent temporary* lack of resources or income is often due to food shortages caused by hazardous events such as natural phenomena or poor agricultural planning, with eventual additional effects on prices.

In conclusion, through a dynamic look on poverty it appears crucial to *mitigate vulnerability* of households in order to reduce chronic poverty incidence AND the probability of entry into poverty, i.e. transient and cyclical poverty. In Section 2 we will approach ways to reduce vulnerability but prior to that we have to understand the poverty ‘drivers’ and the locations of vulnerabilities.

⁷ <http://www.tangatz.info>

B. What are the Drivers of Poverty?

1. Why drivers?

First, we explain the use of the word ‘driver’ rather than ‘cause’ or ‘consequence’.

Causes are too many and can often be found superficially persuasive, offered confidentially and notable for what they do not explain (Galbraith, 1979). Moreover, whether a certain aspect is a cause or consequence of poverty is often not clear. For example, low education can be considered a cause of poverty. However, the poor will answer you that if they were better off they would not hesitate to send their children to school. For them, low education is a consequence of their poverty. We can debate for hours on the causality link but one thing is sure: whether it is a cause or consequence, access to education is of major importance for poverty alleviation.

Consequently, the question whether a particular issue is a cause or a consequence of poverty does not matter since in both cases there is a need to eradicate or at least mitigate the cause or the consequence. The logic of linear causality doesn’t interest us in this case. We think that once poverty is present, it behaves in a circle where cause and consequence are often indiscernible or interconnected. Generally, what makes people poor also creates conditions that keep them poor. This is called the poverty cycle.

Thus, we prefer to distinguish *areas* in which poverty is manifested and *drivers* that could break or maintain the poverty circle. Drivers will improve in quality along the process of enlarging people’s choices and people’s ability to make choices.

If we divide life into three broad areas of activity – socio-cultural, political and economical⁸ – drivers would be common to the three areas. For instance, an essential driver is opportunity or the availability of choices for the poor. The poorer the people are, the smaller the circle of opportunities to escape the downwards spiral and the smaller the chance for the poor to pull themselves out of the circle. Opportunity or availability of choices and decision-making is thus common to all the areas. It is an essential key to escape poverty. Other drivers are access, for instance, to support (family) and services (education, health, credit etc.), ignorance and information, discrimination, violence, participation, risk etc. An improvement of one of these drivers could be of significant importance for the empowerment of the poor and their escape of the poverty cycle. **We will further focus on the risk driver.**

⁸ The areas are detailed in appendix 2

2. Risk: driver of poverty

"Along with death and taxes, risk is one of the certainties of Life" (MacCrimmon and Wehrung, 1986)

Our environment is subject to constant changes. The unpredictability of these changes introduces uncertainty. It is present with or without decision making. Uncertainty is defined by Anderson (2001, p3) as imperfect knowledge, and risk as certain consequences. Risk is thus unavoidable for everybody but some people are better able to manage it.

Box 1: Definition of Risk

The concept of risk can be hazy. Here we will understand risk as a term that includes "hazard \times value \times vulnerability" (Ch. van Oppen, 2002). Where:

- **Hazard** is a source of danger, a peril (e.g. flood, volcano, earthquake, avalanche, defective building etc);
- **Value** is anything of human value, including life, property and/or livelihood;
- **Vulnerability** is the extent of exposure to hazard impact.

Two types of risk can be dissociated according to their dispersion:

- **Independent or Idiosyncratic risk:** It has an impact on people or property independently. It is unique to a household or person (e.g. death, illness).
- **Mass covariant/correlated/systemic risk:** It has an impact on large numbers of people and/or property simultaneously or

Further, risks can be differentiated according to its nature:

- Incited risk: arises from causes within the control of any individual or group
- Fundamental risk: arises from causes outside the control (e.g. disaster) (Oppen, 2002)

A **disaster** is defined by van Oppen as the realisation of a hazard that severely impacts things of human value. The impact of hazard may be

- Direct, such as the immediate material damage in the aftermath of a flood, and/or
- Indirect or consequential, such as the loss of tourism as a result of the flood, the fall in price assets etc.

The impact of hazard may also be

- Tangible: i.e. financially measurable
- Intangible: i.e. cannot be assessed satisfactorily in monetary terms (e.g. grief/stress or loss of a national treasure).

Box 2: The Locus of Disasters

Between 1988 and 1997 natural disasters claimed an estimated 50,000 lives a year and caused direct damage valued at more than US\$60 billion a year. The vast majority of these costs have been incurred by less developed countries (LDC). **94% of the world's 568 disasters between 1990 and 1998 took place in LDCs.** Asia experiences 70% of the World's floods. The average annual cost of its floods over the 1990s was estimated at US\$15 billion. Current trends indicate that the numbers are likely to rise in the future. The impact of such events being dramatic for poverty alleviation, ways to mitigate it efficiently have to be investigated rapidly.

Source: World Bank (2001) and Ulrich Hess (2002)

Important to note is that a hazard on its own is not a disaster per se. It can for example happen in a desert where nobody and nothing is located. The disaster is the occurrence of the hazardous event and its impact on the things of human value.

The poor are the most vulnerable to risk of whatever source. This assertion is intuitively obvious and has been documented in various studies of the World Bank leading up to the World Development Report (WDR) 2000/2001 (e.g., Jalan and Ravallion 1999)⁹ and in the large literature of the predominantly rural phenomena of famines and extreme food insecurity (e.g., Jodha 1975, 2001, Sen 1981 Anderson and Scandizzo 1984, Ravallion 1987, 1997, Anderson and Roumasset 1996, Chavas 2000, Barrett 2001)¹⁰.

The people at risk are the ones who are vulnerable to a hazard, *(CARD client, Philippines)* this means everybody is at risk. But some are more than others.

The poor are extremely vulnerable *because* they are exposed to many kinds of large risks without having the least tools to manage them. But also because of the imperfect knowledge they have from certain risks. Therefore, providing adequate risk-management instruments and supporting the most vulnerable is a crucial element of an effective and sustainable poverty reduction strategy (Anderson, 2001). Because of the higher vulnerability and sensitivity to risk, the negative impact of the occurred risk will be more important than for the better-off. In consequence, the poor are much less incited to seek for higher returns or productivity since this is often related to higher risk taking, and results in much bigger negative impacts in case of negative hazard. Improved risk management can allow taking more important risks while earning higher returns and gradually escaping of the downward spiral of the poverty cycle.

In conclusion, lives of the poor are driven by high risks because they are the most vulnerable to the impact of hazards and because they seem to be exposed to more disasters due to their bad location. Therefore, the poor need more than anybody to reduce the impact of a hazardous event on their lives. In that way their losses will be mitigated and their income smoothen. It may allow them to finally think positively about “tomorrow” and focus their energy and resources on building a better future to escape the poverty cycle, instead of being constantly afraid of how they will cope with the next disaster. Section 2 will provide an approach to risk-management strategies that the poor use or could use to protect themselves from the terrible impact of hazard.

This fight for improvement of the drivers has to be led everywhere and by everybody from the poorest to the richest, not only where poverty is the most obvious but also where prejudice

“Life is one long risk”

⁹ Quoted by Jock R. Anderson, (2001) in “Risk Management in Rural Development”

¹⁰ Quoted by Jock R. Anderson, (2001)

and ignorance cause indifference. For these reasons, the United Nations adopted the Millennium Declaration that outlines the Millennium Development Goals.

3. The drivers' objectives: Millennium Development Goals

The Millennium Development Goals (MDGs) have been established following a declaration adopted by the members of the United Nations (191 countries) in September 2000. The MDGs set targets that have to be met in order to improve the income poverty, education, health, the status of woman, the environment, and global development cooperation. They take 1990 as a starting point and each goal is to be reached by 2015.

Box 3: Millennium Development Goals by 2015 (MDG)

- | | |
|--|--|
| 1. Eradicate extreme poverty and hunger
Reduce by half the proportion of people living on less than a dollar a day
Reduce by half the proportion of people who suffer from hunger | 6. Combat HIV/AIDS, malaria and other diseases
Halt and begin to reverse the spread of HIV/AIDS
Halt and begin to reverse the incidence of malaria and other major diseases |
| 2. Achieve universal primary education
Ensure that all boys and girls complete a full course of primary schooling | 7. Ensure environmental sustainability
Integrate the principles of sustainable development into country policies and programmes; reverse loss of environmental resources |
| 3. Promote gender equality and empower women
Eliminate gender disparity in primary and secondary education preferably by 2005, and at all levels by 2015 | Reduce by half the proportion of people without sustainable access to safe drinking water |
| 4. Reduce child mortality
Reduce by two-thirds the mortality rate among children under five | Achieve significant improvement in lives of at least 100 million slum-dwellers, by 2020 |
| 5. Improve maternal health
Reduce by three-quarters the maternal Mortality ratio | 8. Develop a global partnership for development
Raise official development assistance
Expend market access |

Source: World Bank (2003)

The first seven goals outline what poor countries must do to meet the Goals. The eighth goal is set for the rich countries to confirm their commitment to respond to political and economic reforms in developing countries with increased economic assistance, lowered import barriers and the deduction or elimination of unsustainable debts (UNDP, 2003).

It is with these goals in mind and with the will to undertake sustainable actions that this study will now look closer at the place of action.

In conclusion, poverty, assumed to be very unpleasant, is a variable concept along its distribution and duration. It is influenced by a certain number of drivers, transcendent to the three areas that cover our lives. Improvements of one of these drivers participate to the escape of the poverty cycle. We choose to focus on mass poverty as well chronic as transient and will discuss essentially the risk driver, although it is interconnected with other drivers such as access to services, opportunities etc.

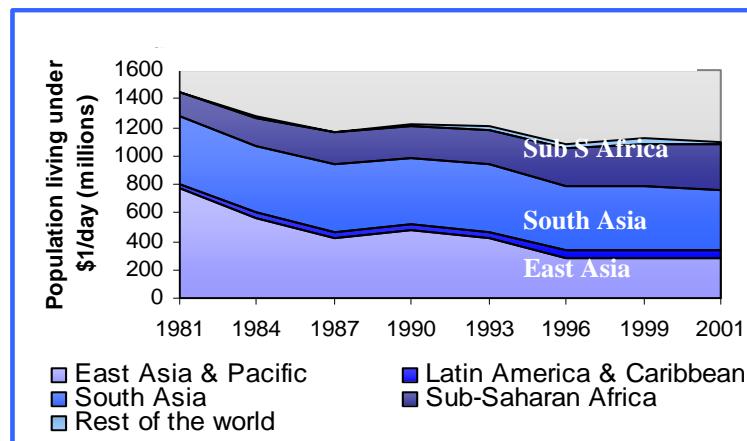
CHAPTER 2. | Where are the Poor?¹¹

A. Worldwide

In 2001, 1.1 billion¹² people were living in *extreme* poverty (with less than \$1 a day), this is 24% of the 5 billion people in low- and middle income countries or 20% of the total world

population (World Bank 2003), i.e. one person out of five. In 1981, they were 1.5 billion, 40 % of the world population. Much progress occurred in the 1980s but progress is also very uneven in its spread. East Asia has experienced an incredible progress in poverty reduction essentially due to progress in China. But the number of poor in Sub-Saharan Africa has

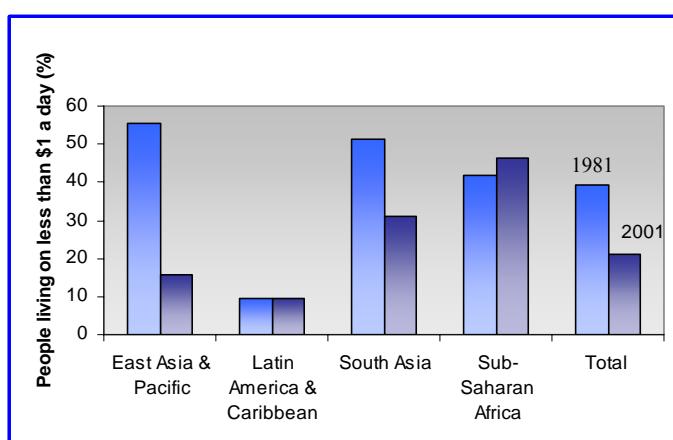
Figure 1: Number of extreme poor by region (1\$/day)



Source : World Bank Indicators (2004)
increased with 40% since 1990.

Bird, Moore et al. (2002) estimated on the basis of limited data that the total number of chronically poor people in the world ranges from 450 million to 900 million, the latter being probably closer to reality. This wide interval is due to a poverty measurement controversy that exists between economists. The World Bank believes that 840 million people are chronically undernourished. These shocking numbers have encouraged people all over the world to continue their battle against poverty. However, one can argue that the standard poverty indexes and other social indicators often do not capture hidden costs derived from economic changes such as ‘informalisation’ of labour markets (e.g. longer working hours, higher insecurity, lower status and deteriorating working

Figure 2: Part of extreme poor by region (1\$/day)



Source : World Bank Indicators (2004)

¹¹ Numbers, if not specified, come from the World Bank annual reports 2001, 2002, 2003, 2004

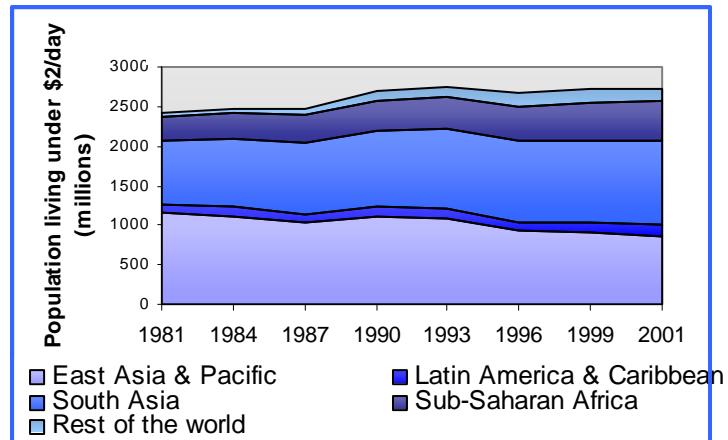
¹² The \$1 a day criterion has been set by the World Bank in 1990 as the definition of **extreme** poverty in low-income countries

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conditions) or seasonal labour migration (e.g. irregular school attendance, the spread of HIV/AIDS, the disruption of family life, and rising urban congestion) that can avoid further economical impoverishments, at least superficially (Drèze, 2002). The director of the World Bank's Development Data Group, Shaida Badiee, points out that improving indicators and data collection is not just a technical issue but a development issue to which everybody should be accountable.

Figure 3: Number of poor by region (2\$/day)

In middle-income countries a poverty line of \$2 a day is certainly closer to a practical minimum, and national poverty lines may be set even higher (WB, World development indicators, 2003). An estimated 2.8 billion people (2001), more than half of the population in the developing world, live from less than \$2 a day,. 70% of these people



Source : World Bank Indicators (2004)

live in rural areas and 90% are come from Asia and sub-Saharan Africa. Figure 2 shows a clear increase in the number of poor worldwide (under \$2 a day). This number has increased everywhere except in East-Asia.

UNICEF estimates that everyday 30,500 children under five years die because of illnesses for which prevention is easy and almost costless (measles, poliomyelitis, tetanus, diphtheria). This is one child every three seconds. In developed countries 7 out of 1000 children die under five. In some developing countries this number is 25 times higher (171 out of 1000). At least 1 billion people do not have access to drinkable water, 220 million children are forced to work to survive, and 300,000 children serve as soldiers in wars.

Are we living in a rich country but in a poor world? The recent global numbers of poverty indicate that poverty could be decreasing. Officially, the poor were 1.3 billion in 1990, 1.01 billion eleven years later. The World Bank predicts more reduction for 2015 if economic growth continues. As Martin Hirsh¹³ notices, these numbers are one side of the reality. The small reduction is essentially due to the reduction of poverty in the two biggest countries, China and India, whose governments are continuously criticized by responsible economists for the manipulation or attenuation of their statistics. Even in these regions of rapid economic

¹³ in "Manifeste contre la pauvreté" (2004)

growth the quality of the life among the poor often remained unchanged, in the absence of adequate social investment (WB, 2004). In South Asia, for instance, malnutrition among children reaches almost 50 %. School enrollment and completion rates are also chronically low.

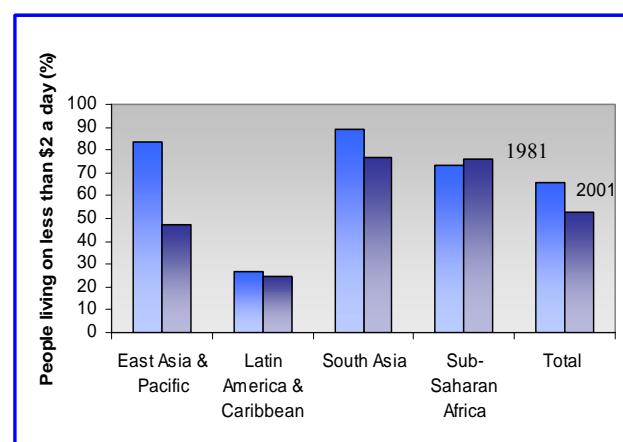
The last World Development Indicators (2004) published by the World Bank indicate that progress towards poverty is very uneven among developing regions. In the following parts of the world the number of poor (i.e. 2\$ a day) has progressed between 1990 and 2001

- from 6 (2.3%) to 7 (2.4%) millions in the Middle East and North Africa
- from 48 (11.3%) to 50 (9.5%) million in Latin America
- from 227 (44.6%) to 314 (46.5%) million in Africa (404 in 2015)
- Central Asia and Eastern Europe: from 2 (0.5%) to 18 (3.7%) million

The total number of people living with less than 2\$ a day increased in number but decreased in proportion between 1981 and 2001.

These statistics and pictures present an uneven progress in reducing poverty. Africa is faithful to its reputation as the forgotten continent. If nothing changes, Africa will need at least a century to meet most of the goals set up by the United Nations. Eastern Europe has also seen a dramatic surge of poverty in the 90's. Although there is evidence of a recent decline in the poverty rate in Eastern Europe, the number of people living with less than 2\$ a day went up from 2% in 1981 to 20% (90 million) in 2001.

Figure 4: Part of poor by region (2\$/day)



Source : World Bank Indicators (2004)

Traps of poverty are also present in *developed regions* of the world. 17 million children are touched by poverty within the European Union with a growing trend (WHO, 2002). Within the OECD countries, Great Britain, for instance, has one of the highest proportions of low-income households. In the UK, 13 million people, of whom 4 million are children, live below the poverty line. Unemployment is at very low levels but employment is often precarious. The situation is not very different in the USA or in France. An American economist, Edward Wolff¹⁴, argued recently that the rapid growth in the USA during the 80s and 90s has mainly benefited the better-offs: 50% of the produced wealth has been captured by the 1% richest and, worse, 80% of this wealth went to 20% of the better-off. The number of people under the

¹⁴ Quoted by Martin Hirsch in ‘Manifeste contre la pauvreté’, 2004.

poverty line in the US has in 2002 increased by 1.7 million (32.9 million in 2001 to 34.6 million). We could even wonder how much poverty traps in developed countries are related to the mass poverty in developing countries.

More than ever, multi-dimensional dialogue between North and South is indispensable. It will enhance mutual understanding as well as self-understanding. Both have to find solutions for a better future. Both worlds can learn from the other how to alleviate poverty, without creating too much dependence of the people on particular political or social systems and with enhanced commitment.

In conclusion, it is hard to get a global picture of world poverty since high disparities exist between regions. However, in certain regions poverty can be seen as the norm. But within a country or region disparities also exist between types of areas: urban or rural.

B. Urban Areas

The problem of poverty in urban areas is considerable and increasing rapidly. During the last ten years, the number of people living in slums all over the world has increased by 36%. Today, almost half of the urban population in developing countries lives in similar conditions, with a majority in Asia. Urban poor are said to double in 30 years: they are 1 billion today and will be 2 billion in 2030 (Hirsch, 2004). Even worse, if no radical action is undertaken before 2050, out of a world population of 9 billion, 3.5 billion will live in unsanitary cities deprived of hard shelter, electricity, water or hygienic services (UN, October 2003).

And it is not confined to inner city slums (Bird, K. Moore, 2002). Low-income populations also exist in large city peripheries, small towns, refugee camps and communities with strong links to both rural and urban livelihoods. In India, for instance, they represent 15% of the population in 1993-1994.

Urban poverty is rapidly increasing. *Its source can be partly explained by rural poverty*. A report by the University of Greenwich's Natural Resource Institute (NRI) outlines the strong informal, social and economic links with rural areas which shape the lives of many of the poor in the rapidly expanding cities of the developing world. For instance, the report notes that urban malnutrition mirrors rural malnutrition: Agricultural seasons affect commodity flows, informal activity in the urban economy and thus income flows which determine seasonal malnutrition.

In conclusion, focusing poverty reduction strategies on rural issues – mainly agriculture – has also a positive effect on urban poverty.

C. Rural Areas

(1) **Poverty incidence** – Another reality cannot be ignored. For most families in developing countries, agriculture and agribusiness are the prime source of income. The world population

is estimated at about 6.0 billion (2001), of which 54% (3.24 billion) live in rural areas. 1.1 billion Humans live in extreme absolute poverty (WDR, 2004). And of these, an estimated 75% live in the rural areas. And 44% of the rural poor are in South Asia. It is projected that even by 2025 over 60% of the world population in 'absolute poverty' would live in rural areas (Ravallion, 2000). Unfortunately, the progress in the reduction of poverty, especially in rural areas, continues to be slow. In a world-wide context, the poverty reduction rate during the nineties (1990-1998) was less than one-third of what is needed to reduce poverty by half between 1990 and 2015 (Okidegbé for WB, 2001).

Table 1: Agriculture in the world

	Low-income countries (GNI/cap < US\$755)	Middle-income countries (GNI/cap < US\$9,265)	High-income countries
Population in rural areas	69%	50%	23%
Agriculture/GDP	27%	10%	2%

Source: World Bank, 2001.

Nevertheless, one could argue that agriculture does not have a very big share in countries' GDP. This is forgetting the fact that it employs 70% of the population. Further, growth of GDP does not mean that the agricultural GDP increases. The risk exists that 70% of the population of a country do not benefit from a significant growth in GDP. Neglecting this represents the best way to increase inequalities. *Ravi Kanbur, professor at the Cornwell University, documents that greater inequality will lead to lower overall human capital accumulation, lower productivity and lower growth.*

As noted by Ulrich Hess, World Bank economist for the Agricultural and Rural Development Department (ARD), these numbers understate the importance of agriculture for economic growth, which is magnified by multiplier effects (through links with other sectors), by the role of agricultural exports as a foreign exchange earner, and by the overriding importance of subsistence farming for the livelihood of the bulk of the population.

Box 4: Livestock of the poor

Of the 975 million poor people living in rural areas, 70% (600 million) depend on livestock as part of their livelihood. For many, livestock is said to be one of the few ways to create assets and opportunities and escape poverty trap. The poor keep livestock under various production systems including: (i) pastoralists, mostly in the arid and semi-arid areas, who have livestock as their main source of livelihood; (ii) small mixed farmers, who use livestock for traction, manure for organic fertilizer and fuel, meat, milk and fiber; and (iii) landless livestock farmers, often in peri-urban areas, who feed animals on residues from arable crops and fodder from communal areas. Women often keep livestock and get most of the revenue from livestock production.

Source: World Bank

(2) Agricultural growth –

The very poor in rural areas have little or no land and they gain disproportionately from the employment generated by the agricultural growth and from lower food prices, as do the urban

poor, who spend much of their incomes on food (Detailed by C. Thirtle and Lin Lin, 2003). Thus, agricultural growth has a powerful impact on poverty because it helps *all* the poor. Therefore, ways to enhance the agricultural productivity growth are from high importance. In recent years, perception of the importance of agriculture for poverty reduction has risen among development organisations:

70 percent of the poor of our globe are in rural areas . . . why is it that this year in the demand for World Bank loans, we're almost at an all-time low in terms of the proportion of our lending for rural and agricultural purposes . . . ? J. D. Wolfensohn¹⁵, President of the World Bank Group (2001).

Thirtle (et al., 2003) made clear with solid regression models that **productivity growth in industry and services does not have a substantial impact on poverty alleviation on the three poorest continents (Asia, Africa and Latin America) whereas agricultural productivity growth does.**

They use their results to show econometrically that investment in agricultural R&D raises agricultural value sufficiently to provide very high rates of returns within the agricultural sector, in both Africa (22%) and Asia (31%) but much less in Latin-America (10%) due to extreme inequality in local land distribution. Important to note is that these investments do not represent a cost to the society but are even extremely profitable.

Moreover, a 1% increase in agricultural yields reduces the numbers of poor living with less than \$1 a day by over 6 million, with 95% of these in Africa and Asia. And the per capita cost of poverty reduction in Africa is \$144 and for Asia it is \$180. (Latin America: \$11,800)

Table 2: Reduction in the numbers on less than \$1 per day from a 1% increase in yield				
Region	Percentage in \$1 poverty (2001)	Number in \$1 poverty, millions (2001)	Reduction in \$1 per day poverty, millions	Cost per person
East Asia	15.6	284	1.34	\$179
South Asia	31.1	428	2.51	\$179
Sub-Saharan Africa	46.5	314	2.09	\$144
Middle East and North Africa	2.4	7	0.12	NA
Latin America	10	50	0.08	\$11,397
East Europe and Central Asia	3.7	18	0.12	NA
Total	21.3	1,101	6.24	NA

Source: C. Thirtle, Lin Lin and J. Piesse (2003) and World Bank (2004)

However, the link between yield growth and R&D is not crystal clear. As Thirtle points out, in many countries it may be that technology generation is not the main problem. Other elements of the context are often predominant. Extension is needed to reach the farmers, tools and other inputs must be supplied, access to credit facilitated, goods and other outputs sold; markets needs to be sufficiently developed and egalitarian ,etc.

¹⁵ Rural Development Strategy Regional Consultations, 2001

The difficulties faced on the path of agricultural growth can be divided in three categories of necessary conditions: local, global and policy conditions (Dorward et al., 2003).

Local conditions include more difficult agro-climatic conditions, population density, human capital and communications infrastructure. These were all a major cause of the lack of any agricultural transformation in many of today's poorest rural areas. They also demand more challenging technological solutions, with higher unit costs of agricultural research. This, in turn, is source of higher risk, since disasters could make the poor lose their investments. This expected higher risk will hinder their search for new solutions and thus make agricultural growth much more difficult.

Global conditions such as today's global markets, population trends, urbanization, and new technologies also present new challenges. The globalisation of markets within the world economy further reduces the terms of trade for poor farmers and may weaken local demand for non-tradable goods and its positive effects on consumption linkages and growth. On the other hand low food prices benefit rural and urban food deficit households (Dorward et al., 2003). It is not clear what the overall balance is but it is sure for many observers that the global exposure has a negative impact on product price stabilisation and thus induces a greater uncertainty for the poor.



Indian cultivators

Policy conditions such as liberalisation or government intervention have their importance too. Over the last 20 years or so there has been a major shift in policy thinking, with increasing recognition of state failure and a move from direct state intervention toward state support for an enabling environment for private sector and civil society, with a stable macroeconomic environment, liberalized markets, tighter fiscal regimes, and a more developed institutional environment (Morrison et al., 2004). This is closely associated with the process of globalization discussed earlier. Current policies promoting education, health, governance, communications infrastructure, and macroeconomic stability all have an important part to play, and should help to provide necessary (but not sufficient) conditions for pro-poor agricultural growth. Dorward argues however, that fundamental new thinking is needed to

develop policies addressing the high transaction costs and low farmer and trader profits that constrain pro-poor market development. These policies must learn from both the successes and failures of past interventions, to avoid the high fiscal costs, unsustainability, inefficiency and ineffectiveness of many of the market interventionist policies of the past, and to deliver reduced transaction costs and increased profitability to farmers and traders. According to Dorward, Kydd, Morrison and Urey, key elements of such policies are likely to include recognition of the problems of transaction costs and risks in inhibiting competitive private sector market activities at critical stages in agricultural transformations; refection of simplistic presumptions that pure competition is always the most satisfactory form of market development; consideration of the direct and indirect costs of alternative policies (comparing, for example, the fiscal costs of successful agricultural development policies with the fiscal and social costs of stagnation, with safety nets and welfare interventions); imaginative learning from refection on failures and successes with different institutional arrangements involving state and other actors; and innovative action research to develop and test different institutional arrangements.

Now that we know the importance of agricultural growth for economy and poverty we would like to solve a specific difficulty for the growth related to local policy conditions: risk.

(3) Agriculture and Risk

We classify **agricultural risk** along three dimensions: type of risk, severity of risk and frequency of occurrence. The first dimension entails variation in the types of risk¹⁶:

- *Climatic* risks include risks of crop or herd loss from drought, flooding, hard rains, hail, frost, snow, hard freeze or wind. In an agricultural environment a climatic risk results in production or yield risk and affects the farmers' ability to repay debt, to meet land rents and to cover essential living costs for their household. This has in turn effects on agribusinesses and rural lending institutions. Many developing countries are found to have a high sensitivity of agriculture and GDP to fluctuations in rainfall (Benson and Clay, 1998). In addition, Czukas et al. (1998)¹⁷ find evidence that non-farm income is positively correlated with shocks affecting crop income. At the end, the precariousness of farmers and producers translates into macroeconomic vulnerability (Hess, 2003).
- *Environmental* risks result in damage to land from soil erosion and to flora and fauna and from pest and disease attacks.

¹⁶ The World Bank categorizes following risks

¹⁷ quoted by Skees (2002)

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- *Social and economic* risks include issues such as damage by careless neighbours (fire, cattle), theft of crop or stock, price fluctuations of commodities and key inputs such as fertilizers, family illness and loss of labour (HIV, AIDS, death), loss of land access (cruel moneylenders), and infrastructure failure (e.g. roads degraded, transport breakdowns).
- *Political* risks include events whose origin is far away. These less manageable events are community resettlement (e.g.

dam resettlement schemes), conflict and war and political alienation/redistribution of land
Along the second and the third dimension, agricultural risks vary in terms of severity and frequency. According to these two criteria, three categories of hazardous event

can be differentiated in rural areas by means of World Bank categorization.

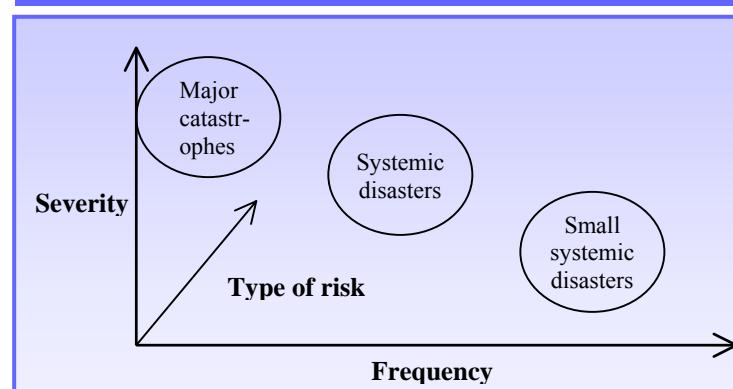
- *Major catastrophes* have a severe impact but occur rarely (once in 50 to 100 years). Thus, there exist limited credible statistical information on the frequency and severity of occurrence. It is impossible for insurers to establish probabilities and calculate premiums. Further, the low frequency does not incite farmers to subscribe this insurance.
- *Systemic disasters* (e.g. systemic crop losses) have a severe impact but occur with documented frequency (e.g. drought every 7 to 15 years). Premiums can be calculated and farmers are more susceptible to buy the insurance.
- *Small systemic disasters* such as higher frequency but lower impact independent crop losses pose less severe impact but occur with increased frequency.

These three severity-frequency categories have all a high negative impact on households in rural areas and on their incomes. These are major drivers of rural poverty. Therefore, for at least the two last categories – systemic and small systemic disasters – households should have access to a tool that would reduce the impact of agricultural risk on their livelihoods. Governments could provide some help focussed on the catastrophic layer of risks (Skees and Barnet, 1999).

D. Conclusion

The question whether poverty is the norm on earth has been found to have no precise answer because a picture of the world poverty must take into consideration the huge

Figure 5: Agricultural Risk in three dimensions



disparities among countries and regions. In some part of the worlds some signs of poverty reduction exist. However, in many regions of the world (e.g. South Asia and Sub-Saharan Africa) poverty does not appear to be the exception but rather the rule, the norm, and even a growing norm. Further, 75 percent of the extremely poor are rural. Urban and rural areas are as much concerned by poverty. Even if urban and rural poverty differ from each other, both are strongly related. During the last years, evidence has shown a significant influence of rural poverty on urban poverty. Moreover, many economists as well as the World Bank argue that growth relieves poverty more efficiently. This view must be completed with the results from Thirtle (et al., 2003) that show that *the sector of growth does matter for poverty alleviation and that it needs to be agriculture-led in the poorer continents*. Thus, improvement in agriculture productivity and efficiency in the developing countries will substantially alleviate rural and urban poverty. But it will also enhance economic growth and reduce local and regional inequalities.

The second part of the Section 1 question is: “**Is the norm – poverty – inevitable?**” There is evidence of drastic changes in poverty. Over the past thirty years, illiteracy was cut by half and life expectancy in poor countries increased by eight years. The Human Development Report 2003 has listed several significant examples. Thus, we are probably the first generation that can actually eliminate absolute poverty from the planet. It is the first generation that can afford it. Do we want to be part of the generation that missed that opportunity? The norm has to be changed by the people who are in the norm but also by those who can support the changes. As Jeffrey Sachs¹⁸ said, poor countries cannot afford to wait until they are wealthy before they invest in their people. Our lives will thus be affected by decisions made in relationship with the poorest of the poor.

The good news brought by recent progress in poverty analyses and observation is that *poverty is avoidable*. Now, let us avoid it. One way among others is chosen to do this, focussing on agricultural production and its relation to rural poverty. Agricultural production encounters many difficulties of which local conditions such as environmental risk factors. Since agriculture is very sensitive to these risks, *the rural poor are very vulnerable to environmental hazards*. As a result, a solution that would reduce the impact of hazard (e.g. climatic) on the life of the poor will be able to alleviate poverty. The solution aims to be *innovative*, based on successful mechanisms and simultaneously enhancing the efficiency and success of these mechanisms by answering its failures. The chosen basis is the famous microcredit model.

¹⁸ Special adviser to the UN Secretary-General on the MDGs; and Professor at Harvard and Columbia.

CHAPTER 3. | What does Microcredit teach us?

We will evaluate and analyse the particular mechanisms and the efficiency of microcredit programs so that a solution to the problem of risk of the poor can be drawn from the strength and weaknesses of microcredit. Before that, microcredit need to be better understood.

How could microcredit better be appreciated than through the life of the poor? The following illustration comes from the Virtual Library on Microcredit.

Box 5: Illustration of microcredit

La Maman Mole Motuke lived in a wrecked car in a suburb of Kinshasa, Republic of Congo, with her four children. If she could find something to eat, she would feed two of her children; the next time she found something to eat, her other two children would eat.

When organizers from the Association¹⁹ interviewed her, she said that she knew how to make chikwangue (manioc paste), and she only needed a few dollars to start production. After six months of training in marketing and production techniques, Maman Motuke got her first loan of US\$100, and bought production materials.

Today, Maman Motuke and her family no longer live in a broken down car; they rent a house with two bedrooms and a living room. Her four children go to school on a regular basis; they eat regularly and dress well. She is currently saving to buy some land in a suburb farther outside of the city and hopes to build a house.

A. Genesis and Profile of Microcredit

As we have seen above, poor people do want to get out of poverty. Most poor people want to mobilize resources to develop their enterprises and their dwellings very slowly over time. However, conventional finance institutions are not willing or able to serve low-income families. Either they think financial services are not applicable to the poor, or the way they provide services to low-income households is not adapted to their financing needs and economic characteristics and contributes worsening their situation.

For example²⁰, conventional commercial lending institutions require that borrowers have a stable source of income out of which principal and interest can be paid back according to the agreed terms. However, the income of many self employed households is *not stable*, regardless of its size. A large number of small loans are needed to serve the poor, but lenders prefer dealing with large loans in small numbers to minimize administration costs. They also look for collateral with a clear title - which many low-income households do not have. In addition, bankers tend to consider low income households a bad risk imposing exceedingly high information monitoring costs on operation. The poor are often located far away from the

¹⁹ Association d'Appui aux Conducteurs des Chariots du Zaïre

²⁰ Piyush Tiwari and S.M. Fahad, "Microfinance Institutions in India", Concept Paper, Housing Development Finance Corporation.

bank branches making physical access difficult because of the transportation cost and because of the risk that the household will not earn its daily food. Finally, the lack of literacy makes traditional banking a terrible experience. The poor have informal alternatives such as family loans, savings clubs, or moneylenders, but these are usually limited by amount, rigidly administered, or available only at exorbitant interest rates (Littlefield et al., 2003).

This is where microfinance makes its apparition as **financial services for the poor** (R Srinivasan²¹) that could enable them to leverage their initiatives, accelerating the process of building incomes, assets and economic security. Microfinance aims to give the poor access to financial services in an honest way. The first financial service that has been widely provided by microfinance institutions - MFIs - is **microcredit**. It is the providing of small loans for people who cannot get loans from banks (Loïc Sadoulet, 2002).

Box 6: Definitions of Microcredit

The definition of microcredit that was adopted at the Microcredit Summit (2-4 February 1997) was²²

Microcredit (mI-[*]Kro'kre-dit); *noun*; programmes extend small loans to very poor people for self-employment projects that generate income, allowing them to care for themselves and their families. - *Microcredit Summit*

Definitions differ, of course, from country to country. Some of the defining criteria used include-

- **size** - loans are micro, or very small in size
- **target users** - microentrepreneurs and low-income households
- **utilization** - the use of funds - for income generation, and enterprise development, but also for community use (health/education) etc.
- **terms and conditions** - most terms and conditions for microcredit loans are flexible and easy to understand, and suited to the local conditions of the community.

The simple **access** to these services makes the discussion of the level of interest rate and other terms of finance greatly irrelevant. The fundamental problem is not so much the unaffordable terms of loan as the lack of access to comprehensive credit itself (Kim, 1995). Less than 2% of poor people have access to financial services (credit or savings) from sources other than money lenders. And less than 10 million out of the 500 million people who run micro and small enterprises have access to financial support for their businesses (VLM, 2003). This vital access is provided through various different credit models (collective lending e.g. Self-Help Groups, village banking, individual direct lending) depending of the institutions (promoters, providers or mixed), countries and characteristics of the customers. However, it is not the aim

²¹ Professor, Finance & Control Area, Social entrepreneurship, and Dean of the Indian Institute of Management Bangalore

²² cited by Hari Srinivas, Coordinator of the Virtual Library on Microcredit (VLM)

How to Alleviate Poverty by Reducing the Impact of Hazard? The MicroInsurance Promise

of this study to describe the full range of microfinance models²³. It is important to note that microcredit in its primitive form existed before specialised institutions entered the scene. The poor managed to build solidarity mechanisms on their own in order to cope with their financing needs. Many of the current microfinance practices, in fact, derive from community-



Entrepreneur (India, 2003)

based mutual credit transactions that were based on trust, peer-based non-collateral borrowing and repayment (Virtual Library on Microcredit, VLM). What is changing is the resources put behind these mechanisms, their sustainability, the scale of their organisation and the quality and price of the services. In 2002, 1065 microfinance programs were counted in 60 countries (VLM). They serve 13.8 million borrowers and totalised \$7 billion in outstanding loans.

Repayment rates (around 97%) are even higher than for the conventional banks (93.7%, Citibank 1995).

A study led by Vijay Mahajan and L Kumar²⁴ attempts to quantify the benefit gain by microfinance in terms of lower *interest cost*. It finds that the effective cost of borrowing from the most traditional source of borrowings for the poor, landlords, moneylenders and traders, spread from 36% to 150% per year. Conventional bank loans such as these under the Integrated Rural Development Program in India bear an effective interest rate of 22-33% a year. Transaction costs such as the number of visits to banks, documentation and, often, bribes drive the effective cost much higher than the 12-16.5% quoted interest rate. Bank loans to Self-Help Groups, given at 12-13.5%, by the time they reach the final borrower are at 21-24%. Finally the loans given by microfinance institutions carry an interest rate of 15%-24%.

Besides the widely used microcredit model, another model has attracted more and more attention; the savings model. This model gives one possible element of answer for the scale problem, by making scalability more applicable. The deposits serve partly as financing of the credit operations. On the other hand, studies²⁵ also show that the poor operating in the

²³ For that, refer to the brilliant “The Poor and their Money” by Stuart Rutherford.

²⁴ Cited by the Economic Times of India in “Microfinance cheapest source of credit for the poor”, April 13, 2004

²⁵ Cited by Piyush Tiwari and S.M. Fahad in “Housing Development Finance Corporation”

informal sector do save, although not in financial assets, and hence value access to client-friendly savings services at least as much as access to credit. Another important feature of savings is that it also makes financial institutions accountable to local shareholders (Tiwari and Fahad). Therefore, adequate savings models and organisations both serve the demand for financial services by the customers and fulfil an important requirement of financial sustainability to the lenders on a bigger scale. MFIs can provide savings services directly through deposit taking if they have the legal framework or indirectly through arrangement with other financial institutions (Barry, 1995). Successful savings mobilizations are essentially characterized by convenience of location, positive real rate of return, liquidity, and security of savings (Christen et al., 1994). Savings are essentially used for lifecycle events such as dowries, education, illness etc. The limitations of savings will be examined later.

Later chapters outline the particularities of microcredit mechanisms, its challenges, impact and effectiveness (strengths and weaknesses), and tracks for improvement of the model. We will also put the extent to which microfinance institutions become financially viable, self sustaining, and integral to the communities in which they operate, in relation with the potential to attract more resources and expand services to clients.

B. What is so particular to microcredit mechanisms?

“Lending is not the problem; the problem is getting reimbursed” (Loïc Sadoulet²⁶)

Since microcredit is lending to people who cannot get loans from banks, insufficient repayment seems traditionally difficult to counter due to the asymmetric information between lender and borrower. The lender has imperfect information on the borrowers' type (adverse selection) and on their actions (moral hazard). The borrower has only a limited liability since it is not “his money”. But particular for credit to the poor is that banks cannot ask collaterals that traditionally constitute a guarantee and compensate the information gap between lenders and borrowers. The poor have no collateralizable assets (Loïc Sadoulet, 2002). Consequently they are excluded from traditional credit takings. *However, because of the absence of collateral, repayment problems could occur even if information was perfectly symmetric. Indeed, borrowers do not have perfect information on their environment. Hazardous events can always affect repayments. The impact of such an event on the repayment rate is limited if it occurs disparately. But if a large number of borrowers are affected simultaneously the lending institution can be threatened.*

²⁶ECARES and MBA Professor at the Solvay Business School and at INSEAD

In this chapter, I will examine how microcredit succeeds to be a valuable answer to the repayment problem. *However, repayment problem is caused by two mainstream phenomena, information asymmetry (absence of collateral) and hazard.* Only the first cause is addressed by microcredit. It is the aim of section II to demonstrate how the second cause, hazard, can be addressed.

To explain how microcredit addresses information asymmetry I consider essentially four mechanisms that characterize most of the microcredit programs and that have been highlighted by Jonathan Morduch²⁷, Professor at the Princeton University and author of many papers that have had a significant influence on the microfinance movement: group lending, dynamic incentives, regular repayment schedule and collateral substitutes.

Group lending – Group lending provides a solution to two major issues of providing financial services to the poor: adverse selection and moral hazard.

Group lending has the advantage of mitigating problems created by **adverse selections**. The key is that group-lending schemes provide incentives for similar types of risk to group together, Morduch calls this *peer selection*.

To understand this, imagine two types of potential investors. Both types are risk neutral but one type is “risky” and the other is “safe”. The risky types have higher returns when successful but fail more often. The MFI knows the fraction of each type in the population but cannot determine who is who. Investors, though, have perfect information about each other. Neither type has assets to put up as collaterals. So the bank is not repaid if the projects fail and consequently must set the interests high enough to cover its per-loan capital cost. This in turn will set the expected return of the safe type lower than for the risky type. On the long term the risky types drive out the safe. Eventually, the risky types lose the cross-subsidization by the safe types, while the safe types lose access to capital.

Ghatak (1999) demonstrates how group-lending as a sorting process, can provide a way to improve repayment rates, allow for lower interest rates, and raising social welfare. He shows that this group contract allows price discrimination that is impossible with an individual-lending contract.

²⁷ Morduch, Jonathan (1999), “The Microfinance Promise”, Journal of Economic literature, vol. 37, pp. 1569-1614.

The second major advantage of group-lending on a financial point of view is the reduction of **moral hazard** by inducing borrowers not to take risks that undermine the institution's profitability (Stiglitz, 1990). This mechanism is called *peer monitoring*.

To illustrate the problem imagine two borrowers. Each of them may do either risky or safe activities and each activity requires the same capital cost. The lending institution has not perfect information on the borrowers and cannot know whether the borrowers have done the risky or safe activity. When projects fail, the return for the borrowers is zero anyway. Both will choose the risky activity because they know the bank does not know.

If the borrowers have to decide jointly which type of activity to undertake because they have a joint liability towards the lender, they will always choose to do the safe activity (Stiglitz, 1990). This self monitoring is good for the lending institution but it put extra risk on the borrowers. However, the MFI can earn more income from the joint liability payments, and can thus lower interest rates for the poor.

Group-lending has other advantages related to **social welfare**. For instance, group-lending implies increased socialization of the group-members. These new meetings can set a dynamic for new projects or/and for problem solving. Further, for the groups made up by women it is also a good opportunity to get out of their oppressed family environment and to gain more weight in their community.

Though it is crucial, group lending is not the only mechanism that differentiates microfinance contracts from standard loan contracts. According to Morduch, group lending has taken most of the spotlight but its role has been exaggerated.

Dynamic Incentives – A second mechanism that permits MFIs to reach high repayment rates with limited monitoring costs involves exploiting of dynamic incentives. The typical way to do this is to begin by lending small amounts and then increasing loan size if repayments are satisfactory (Hulme and Mosley 1996 call this “**progressive lending**”). The information asymmetry problems are here overcome by the repeated nature of the interactions and the credible threat to cut off any future lending when loans are not repaid and this indifferently of group or individual lending. However, competition and increasing mobility of borrowers will reduce the power of this mechanism against moral hazard since borrowers will have the opportunity to take a loan elsewhere. Another limitation of progressive lending is related to the “finite repeated games” problem. If the relationship has a clear end the customer will have

an incentive to default in the final period. However it still permits to test borrowers with small loans at the start in order to build a long term relationship before expanding credit size.

Regular repayment schedule – This feature is less remarked but at least even unusual than the previous mechanisms. Indeed, repayments for microcredit contracts must start nearly immediately after disbursement and are often on a weekly basis. The advantages of regular repayment schedules are numerous (Morduch 1999).

- a. They screen out undisciplined borrowers.
- b. They give early warning to loan officers and peer group members about emerging problems.
- c. They allow the lending institution to get hold of cash flows before they are consumed or otherwise diverted (Stuart Rutherford, 1998)
- d. Because the repayment process begins before investments bear fruit, weekly repayments necessitate that the household has an additional income source on which to rely. This operates a positive selection of clients for the lender and for diversified households.

One important limitation of regular repayment schedules for achieving the mission of poverty reduction hides in the last advantage (point d.). *It implies that households that have a single source of income will have much more difficulties to access capital provided by MFIs.*

These households are mostly present in areas focussed sharply on highly seasonal occupations like agricultural cultivation. Morduch argues thus that seasonality poses one of the largest challenges to the spread of microfinance in areas centred on rain fed agriculture, areas that include some of the poorest regions of South Asia and Africa. The income generation is unstable and regular repayment schedules are difficult to respect. Consequently, this seasonality issue will be addressed in Section 2 where we will seek to give an element of solution.

Collateral substitutes – As mentioned above, a particularity of credit for the poor is that the lender can not ask his clients to provide physical collateral because of the lack of assets that characterizes the poor. On the other hand, these uncollateralized loans are favouring the outreach (Sadoulet, 2003). Nevertheless, many programs have substitutes. Some have physical substitutes such as an “emergency fund” to which borrowers are required to contribute in the amount of 0.5 percent of every unit borrowed (beyond a given scale). This provides insurance in cases of default, death, disability, etc. in amounts proportional to the length of membership. Others have intangible substitutes such as borrowers’ reputation (Sadoulet, 2003). Both, tangible and intangible substitutes, demonstrate *the importance of*

insurance mechanisms serving as collateral substitutes. This particular issue will be addressed in section II.

We have seen that lending to the poor encounters a repayment problem because of the absence of collateral. Information asymmetry and hazard cannot be compensated in a traditional way by selling collaterals. For information asymmetry problems microcredit uses particular mechanisms to ensure sufficient repayment: group lending, dynamic incentives, regular repayment schedule and collateral substitutes. For hazardous events affecting repayment, microcredit does not provide an apparent solution, unless maybe collateral substitutes. But these are not yet very advanced.

Let us have a look now at the challenges that microcredit has to face.

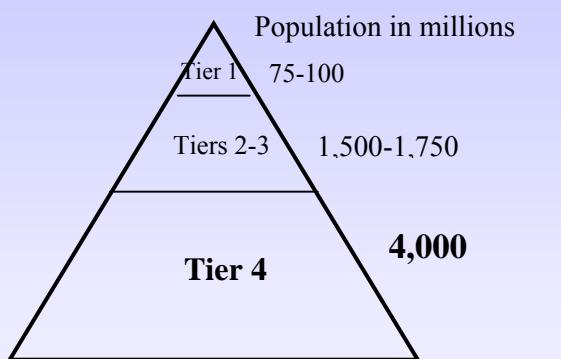
C. What are some of the ongoing and future challenges?

Six challenges facing the microfinance sector are distinguished in order to identify what has to be taken into account for further development of services for the poor: scalability, capacity building, sustainability, focus, regulation, strengthening the link.

Scalability – Despite the success of microfinance institutions, only about 2% of world's roughly 500 million small entrepreneurs is estimated to have access to financial services (Barry et al. 1996). In order to obtain self-sustainability for their financial operation, microfinance institutions must reach a certain level in their volume of financial transaction, although there is demand for credit by poor and women at market interest rates. In other words, although microfinance offers a promising institutional structure to provide access to credit to the poor, the **scale problem** needs to be resolved so that it can reach the vast majority of potential customers who demand access to credit at market rates (Piyush Tiwari and S.M. Fahad). The question is how financial services can be further expanded using the principles, standards and modalities that have proven to be effective. Literature argues that *savings and collateral substitutes* participate in enabling large scale lending with less credit risks.

New alliances and new actors can also participate to the scaling up. The private sector is one of the potential alliances that could help scaling up services. Managers would be forced to consider the meaning of scale – the need to marry highly distributed small-scale operations and a few world scale capabilities – creatively along the value chain (Prahalad and Hart, 1999). The market

Figure 6: The World Pyramid



opportunity here is not just the wealthy few in the developing world, but the norm, the vast number of aspiring poor. Prahalad suggests that if you think of the global market as a pyramid, the vast emerging population base at the bottom of the pyramid can be seen as the next market opportunity and revolution. Conceiving a market of 4 billion of the world's poorest people will force a re-examination of the 'price-performance' relationships for products and services. Addressing their needs will demand a new level of capital efficiency and a change in business models and technologies, because, as pointed out by Prahalad, the game is about volume. Margins are likely to be very low but unit sales very high. Thus managers who innovate and focus on economic profit will be rewarded. Note that Prahalad's strategy should not become a way to increase inequalities by making the poor pay for the wealth of the developed countries. What is sure is that Prahalad's assertion that the bottom of the pyramid is an attractive opportunity seems to be correct. What is less sure is by who this strategy should be overtaken.

The problem is that these markets are hard to reach. The majority lives in rural villages, urban slums and shanty towns. Educational levels are low or nonexistent. These problems encountered to address the bottom of the pyramid are well-known by microfinance institutions. Many of them possess the capabilities to address efficiently the poorest needs (cfr. 4.2). Thus, there is a clear opportunity for microfinance organisations to consider new relations with private companies who possess the adequate motivation and the huge resources, for scaling up their credit activities. However, microfinance organisations should stay careful and keep considering outreach toward the poorest as their mission. But with an adequate governance system and through an equitable negotiation, alliance with the private sector would allow scaling up the outreach while remaining sustainable. This raises another challenge, discussed below, of strengthening the link.

Strengthening the link – One way of expanding the successful operation of local microfinance institutions is through strengthened linkages with their global sector counterparts (Tiwari and Fahad). A win-win partnership should be based on comparative strengths of each sector. More local microfinance institutions have comparative advantage in terms of small transaction costs achieved through adaptability and flexibility of operations (Ghate and al. 1992). They are better equipped to deal with credit assessment of the poor and hence to absorb the transaction costs associated with loan processing. On the other hand, global sector institutions have access to a broader resource-base and high leverage through deposit mobilization (Christen and al. 1994).

In this local-global (or formal-informal) joint-venture a more global institution could provide funds in the form of equity and the local institution extends savings and loan facilities to the poor. Another possibility could be that the global or developed sector institutions *refinance* loans made by the informal sector lenders *or other services* provide by them, i.e. securitization. This kind of partnerships if made honestly and based on mutual trust has two beneficial effects for the reduction of poverty:

1. Informal sector institutions are able to tap additional resources that will help to reach more poor
2. Informal institutions have a greater incentive to exercise greater financial discipline in their management and thus provide better and cheaper services to the poor.

Regarding the benefits that result from a strengthened link between local and the bigger global sector, new development tools such as the one outlined in Section II should consider the opportunity of new linkages.

Capacity Building – Capacity is essential to be successful for financial intermediaries that provide services and generate domestic resources, this in order to meet high performance standards. MFIs must achieve excellent repayments and continue to provide access to clients while building toward operating and financial self-sufficiency and expanding customer reach. Therefore, microfinance institutions need to find ways to cut down on their administrative costs and also to broaden their resource base (Tiwari and Fahad). Cost reductions can be achieved, for instance, through simplified and decentralized loan application, approval and collection processes, through group loans which give borrowers responsibilities for much of the loan application process, allow the loan officers to handle many more clients and hence reduce costs (Otero et al., 1994). A broadened resource base can, for instance, be achieved through a broader client base or/and *wider product and service range*. This challenge with its associated risks is also addressed in the next section.

Sustainability

“Sustainability is the ability to repeat performance in the future. Such permanency takes a flexible organization and a structure of incentives that can maintain performance in spite of changes in the environment. Guessing at future performance is qualitative and so takes human work and smarts. No quantitative measure is enough to show sustainability.” (Mark Schreiner, 1999)

Furthermore, microfinance needs to shift from its dependence on subsidies and its charity orientation, to one of self-sufficiency and financial sustainability. Experience has proven to NGOs and development organisations that only sustainable financial institutions can reliably

provide adequate financial services and continually increase their outreach to the poor. The International Fund for Agricultural Development IFAD identified five tenets of sustainability:

- Viability: cover your costs from the margin
- Self-reliance: mobilize your own resources
- Financial self-sufficiency: be profitable and preserve the value of your resources
- Outreach: broaden your services for the poor
- Impact: help the poor to help themselves

Microcredit providers and promoters seem to behave above average at least in the three first tenets. Since government and donor funds can supply only a tiny fraction of global microfinance demand (and not continuously), financial intermediation by self-sufficient institutions is the only way that financial services can be supplied to lower-income households world-wide (Robinson, 2001²⁸). The new microfinance model challenges the assumption that subsidies are required for microfinance in developing countries and demonstrates that formal institutions can deliver services profitably at the local level. Interventions and subsidies should still not be confused. Interventions in local financial markets remain necessary in certain cases. Donor and government funding are still highly necessary for the majority of institutions. But the trend towards sustainability should lead to reallocation of these funding to capacity building of the institution and separate social actions. Donors can also help to identify institutions committed to sustainability and enhance best practices. However, other development tools should not be forgotten for the poorest of the poor: the provision of food, employment, health, education etc.

In short, sustainability and financial self-sufficiency are indispensable to make MFIs accountable to the poor and optimize donors' funds.

Focus – There is a need to maintain focus on the original mandate. Microfinance activities are intensive in terms of transactions and require different orientations and skills (Sriram and Upadhyayula, 2002). There is often a conflict between the NGO activity of promotion and broader approach to poverty alleviation and the microfinance activity earning returns and seeking for high efficiency. Because of this, many NGOs trigger a spin off. The spin off works in providing financial services on a sustainable basis and the NGO provide support and other services. Another possibility for the NGO is to promote independent MFIs. In both cases the focus need to be maintained on the original mission, providing access to financial services for the poor.

²⁸ In "Microfinance: the paradigm shift from credit delivery to sustainable financial intermediation"

Regulation – An enabling **legal and regulatory framework** should be provided by governments. It would encourage the development of a range of institutions and allows them to operate as recognized financial intermediaries subject to simple supervisory and reporting requirements. For instance, Microfinance institutions should be given freedom of setting interest rates and fees in order to cover operating and finance costs from interest revenues within a reasonable amount of time (Piyush Tiwari and S.M. Fahad). Other examples are license for deposit taking and capital requirements.

We went through the profile, the particularities and the challenges of microcredit but what is its effectiveness?

D. Analysis of the effectiveness of microcredit

1. Strengths and Weaknesses

The importance of identifying the strengths and weaknesses of the microcredit programmes is based on the understanding of the microcredit in order to provide better adapted services to the poor in the future. The corrections and upgrades of the weaknesses will then be used to leverage the strengths.

- ✓ Three main **strengths** of microcredit are recurrent in the literature (J. Morduch, 2002): cost effectiveness, powerful leverage effect, potential financial sustainability.

Cost effectiveness

In most development initiatives, the more people you serve, the greater the cost becomes. With microcredit, the more clients the MFI serves (i.e. the greater its outreach) the more cost effective and sustainable it becomes (Christen et al., 1996; Wright 2000). Sustainability becomes more and more important for programming funds and thus microfinance has an advantage over almost all other interventions. Wright (2000) estimates that with a donor organization investment of as little as \$35 one household can be served with a good chance of positive long-term impact, and with the probability of an increasing number of households being served at no additional costs. Another estimation (Khandker, 1998) suggests that the social cost of supporting microcredit programs is low and is about \$11 per households per year.

Powerful Leveraging effect of donor and state funding

Traditionally, one tried to alleviate poverty by macroeconomic policies linked to structural adjustments processes. Although they are highly necessary and subsequently oriented in ways that tended to limit or minimize social problems, they can hardly bring about a lasting solution (Garson, 1997). The top-down transfers initiated by the state in the direction of the poor often provide short-term or partly relief because nowhere is public or donor money in infinite supply (Mark Schreiner, 1999). In some cases, the permanence of public transfers to some parts of the population often generated frozen situation where none of the actors involved in poverty alleviation had any incentive to move or change. However, I do not argue that public funds are not necessary, on the contrary. Only that they are not sufficient to create long term improvement. In addition, they are not always rightly allocated.

The microfinance approach allows part of the effort to be shared by the poor themselves (Jose Garson, 1997). Credit, combined with the skills and effort of the poor, can create the right conditions to develop income-generating activities. The scarce money allowed to poverty eradication by government and donors can then be leveraged through microcredit.

Potential financial sustainability

As documented earlier, sustainability and profitability of microcredit programs in the developing countries are possible and often necessary. They depend on the same factors as in the case of a conventional company. However the extent of sustainability depends also on the goals of the program and the target population.

CGAP²⁹ reports that 63 of the world's top MFIs had an average return, after adjusting for inflation and subsidies, of about 2,5% of total assets (ROA). For example the Bank Rakyat Indonesia generated a US\$178 million profit in 1996 from its UDES program and Grameen has stopped negotiating for new grants or soft loans since 1995.

- ✓ Microcredit is certainly not a miraculous remedy and is thus also affected by a set of **weaknesses**³⁰: lack of universality, borrowers need to be suitable entrepreneurs (a priori), credit as debt and loan usage, limited growth potential and social issues.

Less universal in its application

The microcredit approach is not valid for all basic needs, most of which must still be met by the state because of the nature of the need and/or the cost involved, nor is it valid for all poor populations (Jose Garson & UNCDF, 1997). The usefulness of microcredit as a tool for

²⁹ Consultative Group to Assist the Poor: department of the World Bank Group.

³⁰ following the classification of Morduch and Haley (2002)

reducing poverty depends on local circumstances (Khandker, 1998). For instance, if the poverty results mainly from unemployment, creating jobs is appropriate. When poverty results from low productivity or low income, increasing productivity through training, capital investment etc. is the key. Christen (1996), Hulme and Mosley (1997) and Greeley (1997)³¹ point out that the economical environment within which a microcredit programme operates is essential to its success. The households financed by the microcredit programs need infrastructure and access to markets to sell the goods and services they produce and offer. Otherwise there is little scope for microenterprise development, and thus poverty alleviation. Parker and Pearce (2001) suggest that certain pre-conditions should NOT hold for microcredit to be an appropriate intervention because lending under these conditions may not produce tangible benefits:

- Immediately after emergencies
- For the chronically destitute
- In severely disadvantaged areas lacking infrastructure, services or access to markets
- Where illness such as HIV/AIDS pervades

They identify other conditions that *may* limit the success of microcredit programs, even the best managed:

- A very dispersed population
- Dependence on a single economic activity
- Reliance on barter rather than cash
- Unstable populations (e.g. those displaced)
- Real potential for future crisis (wars, famines, etc.)

Borrowers need to be suitably entrepreneurial (a priori)

One of the strengths of microcredit is the self-targeting that involves cost effectiveness. But utilizing loans in productive activities requires entrepreneurial skills that a lot of people among poor and non-poor, lack (Khandker, 1998). Thus, *a priori*, the programs should target only the poor with an ability to launch and develop activities with growth potential but lack capital to do it. Khandker³² argues that for the rural poor who are unable to become self-employed, targeted food programs and wage employment may be more appropriate. The program can then provide credit for the entrepreneur who is employer of these. Microcredit also has a limited ability to increase the size of the loan per borrower because of the limited capacity of most of the borrowers to absorb large loans (Khandker, 1998).

³¹ quoted by Wright (2000)

³² quoted by J. Morduch (2002)

However, ex post, microcredit goes beyond business loans (Littlefield et al, 2003). The poor also take loans to invest in health and education, to manage household emergencies, and to meet the wide variety of other cash needs that they encounter. *A large part of the borrowers are not entrepreneurs that seek for growth activities but are people subject to cyclicalities that need cash during periods when they do not have enough.* Ways have to be found to address the different needs separately.

Credit as debt and loan usage

Microcredit may force poor people or groups of borrowers into debt they cannot repay, or into businesses where they can barely subsist (Montgomery, 1996). Moreover, those who receive subsidized credit in many cases likely do not need it (Seibel, 1994³³). In some cases, the poor are then afflicted by unmanageable indebtedness caused by insufficiently profitable income-earning activities in which to invest. Indeed, once people make the observation that their situation is not improving and that some neighbours are improving their livelihoods thanks to microcredit, these people will automatically jump into the program without any project of income-generating activity.

Not all people, and thus, not all poor people can operate businesses successfully. It seems that effects of *failed* investments have received little attention (Marcus, Porter and Harper, 1999). In Hulme and Mosley's seven country study (1996), it is detailed that an important proportion of enterprises financed by MFIs do fail! For example 10 to 15% of those supported by BancoSol, a leading microfinance organisation in Bolivia, and 25% of the early activities financed by the Malawi Mudzi Fund. A failed investment often means repayment difficulties particularly for the poorest. Other investments may fail because of external risk factors affecting negatively their income generation and causing default in repayments. Consequently, *offering credit may make some people worse off by obligating them to debt they cannot repay. They become dependent of loan taking to repay other loans and enter into a spiral of indebtedness.*

Limited growth potential?

A case study of TCP in South Africa made by Morduch makes clear that the members are running a fairly small range of different business types, with most being some sort of "petty" trading. It leads to increasing competition. Once a certain level is achieved there is a potential to take jobs away from others who operate in the same area and with microcredit loans. There is a strong need for *diversification* if we want to avoid value destruction.

³³ Quoted by Buss (1999)

Social issues

In some cases, credit taking can have as consequence increased work loads (Vengroff and Creevey, 1994³⁴) since if the activity does not return enough money to repay the loan the only way to repay is to work more or for more people. Women, who are a significant part of the borrowers, often employ daughters and daughters-in-law as unpaid employees thereby increasing their workload (International Labour Organization, ILO).

The International Labour Organization also notes that microcredit enhances considerably the social pressure to ensure loan repayment. *Social pressure helps MFIs to achieve reasonable repayment rate but it can have negative effects (exclusion, self-exclusion, depression, etc.) on the borrower if his or her activity is not successful or if he is affected by hazardous events (floods, family happenings, droughts etc.).*

Strengths and weaknesses of the microcredit model have been assessed but we do not know yet of the model is efficient in alleviating poverty.

2. Does microcredit lead to sufficient outreach and poverty reduction?

Many rigorous and long term studies have been undertaken in the last few years around the client outreach and impact of the microfinance programmes. Many of them were spurred by the development of monitoring tools like the CGAP Poverty Assessment Tool, USAID's AIMS tools, etc.

J. Morduch conducted a focused review³⁵ of the broad literature to evaluate the publications regarding the impact of microfinance on poverty reduction. His review shows, among other results, that *MFIs show considerable diversity in their ability to reach poor populations but also that financial performance of the organisations does not imply excellence in outreach to poor households. However, he finds out that reaching the poor is not at odds with maintaining the excellent financial performance and professional business practices. Another strong assertion that is common to the studies is that programs that make poverty reductions an explicit goal and make it a part of their organizational culture are far more effective at reaching poor households than those that value finance above all else.*

The review also points to the existing evidence of the positive impact of microfinance on poverty reduction as it relates to the first six out of seven Millennium Development Goals

³⁴ Quoted by International Labour Organization in « Woman in the informal sector and their access to microfinance »

³⁵ Morduch, J., B. Haley (2002), "Analysis of the effects of Microfinance on Poverty Reduction", NYU Wagner Working Paper, No. 1014

detailed above. Mark Malloch Brown, Administrator of the United Nations Development Programme (UNDP), noted:

"Microfinance is much more than simply an income generation tool. By directly empowering poor people, particularly women, it has become one of the key driving mechanisms towards meeting the Millennium Development Goals, specifically the overarching target of halving extreme poverty and hunger by 2015."

There is an impressive amount of evidence (Appendix 3) demonstrating a beneficial affect on

- Increases in income (Wright 2000; UNICEF 1997; Khandker 2001, 1998³⁶)
- Decreases in vulnerability through income smoothing (Wright 2000, Zaman 2000; McCulloch and Baulch 2000)

Fewer studies seem to exist with evidence on health, nutritional status and primary schooling attendance, but the existing evidence is largely conclusive and positive (Wright, 2000).

Promoting Children's education

One of the main things people do when they have money is provide a better life for their children. Again the poor are in no way different in this. Various studies show that the children of microfinance clients are more likely to go to school and stay in school longer. In these households the drop-out rates of the children is much lower³⁷.

Many microfinance programs have developed new products specifically for school expenses.

Improving health outcomes for women and children

Illness has a very big impact on the livelihoods of the poor. Family deaths, taking time off from work when sick and health-care expenses, all have a strong negative impact on cash flows (Littlefield E. et al., 2003). Very often it will lead to selling assets and indebtedness. For borrowers, illness is often the main reason of failure to repay the loans.

Studies show that households of MFIs' clients seem to have better nutrition, health practices, and health outcomes than comparable non-client households³⁸ (Littlefield et al., 2003). Larger and more stable incomes generally enable the poor to achieve better nutrition, living conditions, and preventive health care. Health problems are treated more promptly because the client is less waiting for conditions to deteriorate. Some MFIs now provide, along with the financial services, health education such as short, simple preventive care messages on immunization, safe drinking water, and pre-natal and post-natal care. Some programs provide credit products for water, sanitation, and housing. As we will see there are a growing number

³⁶ Quoted in Morduch (2002)

³⁷ For an exhaustive list of studies that support this, see Appendix 3

³⁸ For an exhaustive list of studies that support this, see Appendix 3

of partnerships forged by MFIs with insurance providers to offer health insurance to clients. (Littlefield et al., 2003)

Empowerment of Women

"I cannot even begin to say all of the advantages of the GANEF program [...]. Above all, I have become respected in my home."
(Rokia Fomba, Mali)³⁹

Women are the most common target of the microfinance programs. Why is this so? Several reasons have been documented by various studies and highlighted by Elizabeth Littlefield, Johnathan Murdach, and Syed Hashemi. Women:

- Often prove to be more financially responsible
- Achieve much higher repayment rates.
- Are more likely than men to invest increased income in household and family well-being
- Access to financial services can **empower** women.

Empowerment permits women to become more confident, more assertive, more likely to participate in family and community decisions, and better able to confront systemic gender inequities (Schuler and Hashemi, 1994). Thus, microfinance appears to be a fantastic enabler for the women. Because of that, in many programs women are the majority of the clients. However, it should not be limited to the women.

Outreach

Another major concern regarding the impact of microfinance on poverty reduction is the outreach, particularly towards the poorest. Morduch found a general consensus in literature that Microfinance is not for everyone. *Entrepreneurial skills* and ability are necessary to run a successful microenterprise and not all potential customers are equally able to take on debt, but no evidence has been found of an inverse relationship between a client's level of poverty and their entrepreneurial ability (Garson)⁴⁰. However, in practice, microenterprise is not the only reason to take a loan. It is essential to note that there is little evidence in literature that clients with existing microenterprises or employment are the only ones that can benefit from microfinance (Robinson, 2001; Hulme and Mosley, 1997). The occurrence of credit to poorer people for "*consumption*" has been largely underestimated. A survey in India (Mahajan and Ramola, 1996) found that consumption credit comprised two-thirds of the credit needs of households below the poverty line. The poorer people use the consumption credit for food,

³⁹ Cited on the Virtual Library on Microcredit

⁴⁰ quoted by J. Morduch and B. Haley (2002)

health care or housing improvements, all of which can protect or promote the health and labour power of household members, thus *protecting livelihoods against...risk*. Another major use, noted by Rutherford (1993), is to pay off other loans with higher rates of returns. This can reduce the dependence of the poorer people on moneylenders and/or employers and free themselves from bonded labour imposed along with loans.

Further, the *sick, mentally ill, destitute, etc.* appear not to be good candidates for microfinance. Most researchers agree that they would be better candidates for direct basic assistance.

Outreach for the poorest

Nevertheless, there is a lot of questioning about the outreach for the poorest of the poor. According to Wright (2000) the bottom 10-15% of the population is rarely reached by the microcredit programmes. *It is important to note that it is not because they do not need it. It is rather largely driven by the nature of the financial services provided by the MFIs that force either the poorest to choose not to join either those who guarantee or follow-up their loans to exclude them.* The ASA study⁴¹ revealed several direct or indirect exclusion factors:

- Lack of minimum clothing to attend a public meeting (98,8% of respondents)
- Role of the local elite (moneylenders, religious leaders, union chairman, etc.); 87%
- ASA's age limits on membership (18-50); 77%
- Screening out by the staff as too risky clients (possibly for pragmatic and legitimate reasons)

It has been observed that for the poorest households the **risk** of taking loans that are repayable on a weekly basis is unacceptably high (Wright 2000 and Alamghir⁴² 1997). *Their income sources are not certain and diversified enough in order to assure them a certain level of stable earnings necessary to make weekly repayments. Thus, there seem to be an opportunity to develop still more flexible financial services to attract the poorest.* As Rutherford (1993) argues from his research in Bangladesh with the very poor, the poorest commonly practice 'self-exclusion' from microcredit schemes because they do not perceive them as a solution to their livelihood problems⁴³.

Another factor, noticed by Hulme and Mosley, that possibly makes microcredit more ineffective for the poorest particularly in the case of group schemes are the very large

⁴¹ 626 respondents drawn from a mixture of ASA staff and clients (1997)

⁴² quoted by J. Morduch (2002)

⁴³ quoted by Hulme and Mosley (1997)

processes of social exclusion; Poor group members often decide that some prospective members are “too poor” to receive membership.

The same authors also found evidence that for expanded credit programmes where management is professionalized, the incentives for staff (bonus payments and promotion prospects) favour a concentration on groups other than the core poor.

The last few years MFIs have begun to realize their breach of service for the poorest and thus for the poor, and are adapting their processes. Some have explicitly put the poorest as target of their policy since there is evidence that institutions with the poorest as a clear target reach identical levels of financial sustainability as the MFIs with financial performance as goal. The latter will slip to middle and upper poor.

Yet, sometimes the poorest do take loans. In that case, literature (Hulme and Mosley; Marcus, Porter and Harper 1999) suggests that the incomes of the poorest participants generally increase much less than those of “less-poor” participants. The better-off poor usually have more resources, both financial and in terms of knowledge and skills. They can use them to develop and improve their business. They also have better social networks and access to markets and have more self-confidence (Robinson and Ridell, 1995). The consequences of an investment failing are not as severe as they are for the poorest that are more vulnerable people. Consequently, and ironically, *the horizons of the poorer people are limited by the microfinance programmes and these latest confine them to low-return low-risk activities* (Marcus et al. 1999)

Problem of risk

Results of studies by Pitt and Khandker (1998) and by Morduch (2000) demonstrate, for broad samples of households that take part in a microcredit program, some signs of consumption smoothing across seasons. Their results suggest that *benefits from risk reduction may be as important (or more important) than direct impacts on average levels of consumption, whereas it is not the first purpose of microcredit*. This phenomenon can be interpreted as the fact that other *risk reduction mechanisms could be more appropriate* for a large part of the clients and more efficient in this role than the actual microcredit programs which have different initial objectives.

Besides the hidden role of risk reduction for some of the borrowers, *microcredit can possibly enhance the risk of other borrowers*. Microcredit allows the poor household to take advantage of opportunities or to create them, that is, to assume risks it could not otherwise take, in order

to obtain higher returns (Dunn et al., 1996). However, it is not because the poor can take risks more easily that they are less vulnerable to them. On the contrary, better access to new opportunities makes them more vulnerable, since often higher risks are associated. Consequently, *the impact of hazard becomes more important if the hazardous event occurs, unless the poor use the credit to confine themselves to low-risk low-return activity that will not reduce their poverty.*

If microcredit enhances the vulnerability of the poor too considerably instead of enhancing their income and power, the product is not well designed. It does not mean that microcredit is inappropriate for that category of poor. *Mechanisms can be found that reduce this vulnerability while continuing making microcredit.* The poor already use some informal mechanisms to cope with the higher risk related to opportunity taking. However, these are expensive and are not available for the poorer (see below).

As we have seen, information asymmetry is not the only threat for repayment of uncollateralized loans. The presence of correlated hazard among the borrowers could affect the MFI through lack of repayment. This is confirmed by the use of microcredit for income smoothing and risk reduction and not so much for increasing income through entrepreneurship. A solution has to be developed that offers a separate service in order to use funds optimally and minimize the cost for the society. This issue will also be addressed in next section.

In short, the problem of risk that concerns microcredit is threefold: the initial purpose of microcredit has deviated, microcredit increase risk and vulnerability of the borrower, and risk, through its hazard component, is a problem for repayment and sustainability of the MFI. Section 2 aims to answer these issues to leverage microcredit efficiency, especially outreach.

E. Does Microcredit teach us something about poverty alleviation strategy?

First, microcredit has shown us that, despite high transactions costs and no collateral it is possible under specific conditions, to lend in a profitable and sustainable way to poor and very poor households.

Second, one of the main aims of the microfinance movement is that it goes behind commonly accepted wisdom and images such as ‘the poor do not need credit’ or ‘the poor do not want to

improve his livelihood' etc. It goes beyond this for one particular reason; it starts with the poor. Microfinance is *demand-driven*, with demand generated by the poor, and that makes its success. The poor are willing to pay for access.

Third, the programs demonstrate the importance to think creatively about mechanisms design and it forces the economists to rethink permanently much received wisdom about the nature of poverty, markets and institutional innovation (J. Morduch, 1999). Nevertheless, it is clear no one model is suitable for all situations. As noted by Von Pischke, Schneider and Zander (1997: 36):

"Retaining and even supporting diversity is important...Successful models cannot simply be replicated in social and economic environments that may differ greatly. Thus, no single model offers a panacea."

Moreover, it is clear that innovation should be *continuous*. It is generally accepted in the management literature that "best practice" organizations should adopt a client focus, and develop systems that encourage continuous improvements in products and services to serve clients better. Organizations providing financial services to the poor are no exception. They should constantly monitor the economic, social, technological and other environments to improve existing products and develop new products which serve the poor better.

Fourth, it creates a point of contact for many people between the developed and developing countries and their policy makers and participate to the reduction of ignorance at both sides.

Eventually, the microfinance movement has also lifted the profile of NGOs (J. Morduch, 1999). NGOs increasingly take over some social tasks that the governments fail to achieve. However some domains remain of the exclusive competence of governments and international organizations.

CHAPTER 4. | Conclusion of Section 1

By considering **poverty** along its characteristics and incidence we identified the risk factor as a recurrent and determinant aspect of the life of the chronic and transient poor. We decided to focus especially on mass poverty in **rural areas** which include 70% of the poor and have a significant impact on urban poverty. Developing economies are more positively affected by agricultural growth than industrial growth since better agricultural productivity reduces substantially poverty. In this chapter special attention has been given to the **microcredit** phenomenon. Lending does not seem to be the problem for microfinance institutions, but rather being reimbursed. Repayment problems are shown to be caused by two mainstream

phenomena, *information asymmetry and hazard*. Microcredit succeeds to be a valuable answer to the repayment problem solely caused by the information asymmetry and the absence of collaterals. Four mechanisms make this possible: group lending, dynamic incentives, regular repayment schedules and collateral substitutes. However the regular repayment schedules have an important drawback for households with unstable and non-diversified incomes. These are particularly vulnerable to hazard. Either they will exclude themselves or they will probably have to face an indebtedness spiral. Collateral substitutes present an interesting path to enhance repayment through insurance mechanisms since microcredit does not solve the repayment problem due to hazard.

Second, **challenges** were outlined. Although microfinance offers an effective institutional structure to provide access to credit to the poor, the scale problem needs to be resolved so that it can reach the vast majority of potential customers who demand access to credit at market rates. It is possible by expanding financial services such as savings and collateral substitutes. But there is also a clear opportunity for microfinance organisations to consider new relationships with private sector companies who possess the adequate motivation to address the bottom of the pyramid as well as sufficient resources, for scaling up their credit activities. Microfinance institutions and NGO could share their experience in addressing the needs of the poor and help companies in changing their business model assumptions. However, poverty reduction needs to remain central in their negotiation and governance. Regarding the benefits that result from a strengthened link between local and the bigger global sector – access to more resources for greater outreach and higher discipline – new development tools such as the one outlined in Section 2 should consider the opportunity of new linkages. A broadened resource base achieved through a broader client base or/and wider product and service range may then support capacity building of the institution. Furthermore, microfinance needs to shift from its dependence on subsidies and its charity orientation, to one of self-sufficiency and financial sustainability to provide adequate financial services and continually increase outreach to the poor. Sustainability and financial self-sufficiency are indispensable to make MFIs accountable to the poor and optimize donors' funds. Appropriate regulation could allow operations such as international funding for instance and enable recognition of the special status of microfinance.

Microcredit presents very valuable strengths. However, **weaknesses** need to be addressed to increase poverty reduction. It is not universal enough, creates indebtedness problems for who

cannot repay regularly because of cyclical or single incomes and thus results sometimes in unhealthy social pressure. Reaching the poor is not at odds with maintaining the excellent financial performance and professional business practices. Programs that make poverty reductions an explicit goal and make it a part of their organizational culture are far more effective at reaching poor households than those that value finance above all else. Microcredit does have positive impacts on income and vulnerability reduction resulting in improvements in six of the MDGs. Children's education, health outcomes of children and women and women empowerment are very important results of microcredit schemes. Nevertheless, outreach is still questionable.

Outreach – We noted two different problems related to outreach. First, too often the poorest have no access to financial services. It is caused either by self-exclusion either by prejudice of the other actors (social exclusion) or misconceptions of the financial product. Often their income sources are not certain and diversified enough in order to assure them a certain level of stable earnings necessary to make weekly repayments. Second, when the poorest do have access and take part in microcredit programmes they seem to receive few direct benefits for the increase of their income. Besides the hidden role of risk reduction for some of the borrowers, microcredit can possibly enhance the risk of other borrowers. Consequently, the impact of hazard becomes more important if the hazardous event occurs, unless the poor use the credit to confine themselves to low-risk low-return activity that will not reduce their poverty. Further, some of the benefits they receive indirectly - income smoothing - could be provided more efficiently (directly) through alternative assistance strategies, since informal alternative strategies appear to be expensive and not available for the poorest. Thus, there is a stringent need to develop formal strategies such as microinsurance that would reduce vulnerability and impact of hazard especially for the poorest and enhance efficiency and outreach of microcredit.

SECTION 2: THE MICROINSURANCE PROMISE?

CHAPTER 1. | How can the problem of risk be solved to alleviate poverty?

"It is only when people have economic security that access to credit can help them move out of poverty by improving the productivity of their enterprises or creating new sources of livelihood" (Bennet and Cuevas 1996).

A. Which are the risks faced by the poor?

As detailed above, risks entail vulnerability, hazard and value. The poor prove to be the most vulnerable to the hazard of life (the more ‘at risk’). They do not dispose of enough material or social resources to cope with the hazardous event when it occurs. Being already in an unstable position for which they have to struggle every day, the impact of hazard would be really catastrophic for their livelihoods because it destroys every resource they managed to build up, including hope. Further resources, when available, are extremely valuable for their survival and escape from poverty. It makes the risk still higher

Most of the risks encountered by the poor are common to those of every human being. They are related to *persons*: Death, health, disability, other life cycle events (i.e. marriage, birth, education costs etc.). Or they are related to *property*: relocation, disasters (i.e. floods, droughts, earthquakes, fire, volcano etc.), theft etc. Both are interconnected. A risk affected to a property has an impact on the person, for instance his health. Agricultural risk, detailed on page 21, is related to property but has impact on persons.

Moreover, among the poor differences exist in vulnerability to hazard, depending on the environment. For instance, slum dwellers are generally more vulnerable to fire or theft than rural people. In rural region, people are more vulnerable to climate changes, seasonality, droughts, or transportation of sick family members.

*Two main issues make the poor different from the better-off towards risk. The first is, as I said before, the much **higher vulnerability**. The second is the availability and access to risk management tools to mitigate and cope with the impact of the hazard. In some cases risk management tools could be used easily but the simple lack of knowledge of them makes them nonexistent. In other cases, informal decisions are taken instead.*

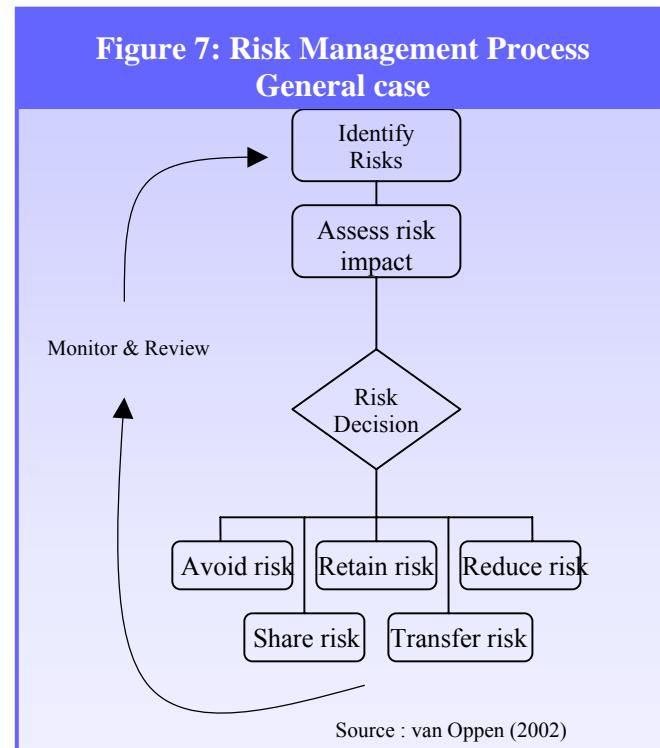
B. What is Risk management?

Risk management is defined by Charles van Oppen as the systematic positive identification and treatment of risks posing a threat to values (or resources) of human concern. It is a very large term that is widely used across various activities and aspects of life since risk is everywhere. We have to dissociate risk management arrangements and risk management strategies (E. Skoufias, 2003). The first include all informal and formal arrangements (market-based and public e.g. social safety nets) that have evolved for the purposes of providing some protection for households in the event of a crisis. The latter covers all the prevention and mitigation strategies that households may implement before the crisis occurs, as well as all the coping options that are available to households afterwards. Only the risk management strategies are particularly covered below.

Risk ‘management’ is mainly about decision-making and its context. And like every decision-making it follows a process. *First, the process will be described using Charles van Oppen (2002) model, for the general case. Then, the insurance tools will be briefly discussed. Eventually, I will show the process specific for the poor and suggest how it could or should evolve.*

Identify risks

The first step is to identify the three elements of risk. What are the hazards? What is at risk, which values? How vulnerable are the values? The last one evolves identification of the proximity and sensitivity to the value. Amongst the techniques used commonly by risk managers are: site surveys, check lists, flow charts, organisational charts, and simple brainstorming (Dickson, 1991)⁴⁴. Identification can thus be quantitative and qualitative. However, the identification for poor households operates more intuitively or by experience since vital risks are obvious (see above) and resources limited



⁴⁴ quoted by C. van Oppen (2002)

Assess risk impact

The second step in the process is to assess the:

- a. Frequency with which such a hazardous event may occur. The uncertainty of a risk can be thought of in terms of three elements (Brown and Churchill, 1999):
 - If the risk event will occur
 - When the risk event will occur
 - How often the risk event might occur or frequency
- b. Severity of the loss if it does occur. It may be a one time payment (e.g. replacement of destroyed property) or ongoing (e.g. loss of future earnings due to long term illness). It is also a relative concept depending on the resources of the person.

An example of assessment would be a scoring of the impact through ranking of the risk along these two characteristics. It could also consist of sensitivity analyses.

Risk Decision⁴⁵

Now that the risks are identified as well as their perceived level or threat, the person or the group has to take a decision. The decision consists in ‘choosing’ the appropriate risk-return trade-off. The decision is affected by the person’s attitude toward risk (i.e. degree of risk aversion). This decision will depend on the options available and their benefits and costs. However, no one treatment of risk is complete on its own but together they can provide a holistic treatment.

- a. **Avoid risk** – People avoid risk when the activity that entails this risk is considered too risky in terms of human and financial impact, for example, planting a crop on a flood plain (van Oppen, 2002). If you know that once in five years the crop will be washed away it may be worthwhile to invest in seeds, fertilizer and labour. But if one observes changing flood patterns in the last years then the decision to avoid the risk can turn out. The benefits will be not being exposed to flood risk. The cost will be the loss of harvest during the years of no flood. A common measure to avoid risk is escaping from the place of occurrence or migration and sometimes to seek asylum.
- b. **Retain risk** – There are two ways to retain risk, voluntary and involuntary (because the person or group cannot avoid or transfer the risk). The reasons for risk retention are numerous:

⁴⁵ Adapted from Irukwu (1991) and van Oppen (2002)

- Social obligations or economic commitments (such as responsibility to relatives and family share of a business)
- Insufficient knowledge about risks, their impact and management tools (including education and awareness)
- Lack of information about alternatives (including communication problems)
- Political reasons (including national boundaries)
- Risk is uninsurable because of its quality. Not all risks are insurable.
- Prohibitive cost of insurance
- Insurance is unavailable (e.g. for institutional reasons)

c. Reduce risk – The impact of hazard can be very destructive and disruptive for human lives. It is crucial in certain circumstances to find ways to reduce the risk, lessen the severity of the impact. Two different reduction mechanisms can be used. On the one hand, preparedness measures or risk management *arrangements*. These ensure the readiness and ability of a society to forecast and take precautionary measures in advance of an imminent threat (e.g. warning systems and contingency plans) as well as organizing ex-post assistance (van Oppen, 2002). On the other hand, mitigation measures as a risk management strategy. Mitigation measures are diverse: from physical controls such as flood defences, to legislation, training and public awareness.

d. Share risk – Most of the time, the sharing mechanisms are informal. Families and religious communities share risks on the basis of informal duty to assist the other members that are in need. This often finds its foundation in trust and reciprocity.

e. Transfer risk – Instead of changing location, the person can displace the risk by:

- Contracting out: In this case, the person or group transfer a risk activity to a third party by contract. For example, a farmer may pay a safe and dry storage place for his crop to avoid risk of perishing due to moisture and risk of theft and fire. Under contract he may recover the value of his crop if the storage place does not perform their part of the bargain and the crop perishes or disappears.
- Insurance: The farmer may also decide to keep the crop in his domain and decide to transfer the risk by insuring it. The farmer can exchange a known cost (premium) for an unknown cost (the loss) at some future date during an agreed period (Ch. van Oppen, 2002). We will discuss this mechanism more in detail on page 60.

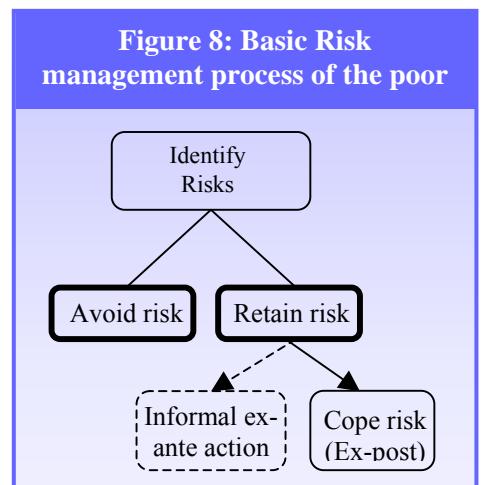
f. Monitor & Review – This part of the process may be neglected more often because of its indirect impact on the process. However, it seems to be the most important link to maintain a sustainable and comprehensive process. Policy compliance and updates have to be ensured. Environments are continuously changing as well as risks (values, vulnerabilities and hazards). Processes need to be adapted.

C. What is the Risk management process of the poor households?

Now that the risk management process commonly used in wealthy and well-informed environments is better understood, we can approach the way the poor deal with risk. Most of the time, the poor do identify their risks because their history and personal experiences have taught them. They know they are vulnerable and estimate the hazard and the values at risk. There is a lack of assessing the impact of the risk on their households. Techniques for measuring risks such as Value at Risk and sensitivity analysis or more simple ones such as calculating means and variances can not easily be used by the poor. Often they don't have the required education or the required material resources.

Once the risk is identified their *reaction* is twofold. Either the risk is avoided or it is retained. When they 'estimate' the risk to be too high and when the context allows it, the risk will be avoided. A widely used avoiding technique is migration. For instance, the risk of drought or flood can become too high for rural landless households since they expect that the impact of such an event, even if hazardous, will have consequences impossible to cope with for their livelihoods. Thus, they will migrate to other jobs such as brick maker or garbage sorter, to other crops, or to other regions where they think they will find better employment opportunities, fewer hazards. But migration has huge social costs for the households, villages and for all the society since it causes phenomena such as urbanisation, family splits, higher transportation costs, greater vulnerability, opportunity costs, loss of dignity etc. Moreover, by avoiding some risks they will encounter new ones. Hazard is everywhere.

On the other hand, many people do not want, may not or can not avoid the risk because of the need of producing resources to survive, the impossibility to displace all the family and elder members etc. (cfr II 1.2.b, p 50). They will have to retain the risk, voluntarily or involuntarily. The problem is that they do not dispose of enough formal risk management tools.



How to Alleviate Poverty by Reducing the Impact of Hazard? The MicroInsurance Promise

However, when retaining the risk, informal mechanisms are used to mitigate, reduce and share it ‘ex ante’ and cope with it ‘ex post’. Ex ante, the households can adopt preventive health practices, infrastructure building (e.g. dikes, irrigation etc.), crop and plot diversification, informal savings (buffer stocks) and ROSCAs⁴⁶, marriage etc. Ex post, the impacted household may sell its assets, use the children as labour force, take loans from moneylenders, friends and family (Hanen and Skoufias, 1998), reduce food consumption, change fertility, adjust households’ structure etc. The poor live life rather on a reactive mode, moving from crisis to crisis (Cohen and Sebstad, 2003).

Table 3: Taxonomy of Informal Mechanisms for risk management of the poor

Strategies when retaining risk		Informal mechanisms	
		Individual & households based	Group based
Ex Ante	Reducing risk	Preventive health practices Migration More secure income sources	Collective action for infrastructure, dikes, terraces Common property resource management
	Mitigating risk	Crop and plot diversification Income source diversification Investment in physical and human capital	Occupational associations Rotating savings and credit associations (ROSCAs)
	Insurance (transfer & share)	Marriage and extended family Sharecropper tenancy Buffer stocks	Investment in social capital (networks, associations, rituals, reciprocal gift giving)
Ex Post	Coping with risk	Sale of assets Loans from moneylenders Child labour Reduced food consumption Seasonal or temporary migration	Transfers (cash, human resources) from networks of mutual support (e.g. family, caste, profession)

Source: Adapted from World Bank (2001b) and Skoufias (2003)



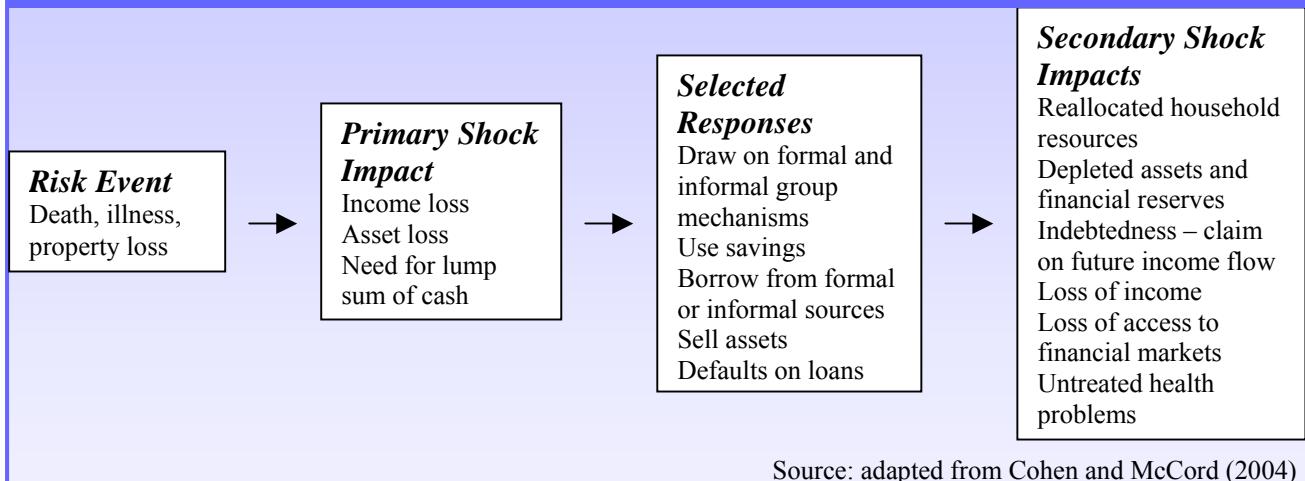
*Drought works – formation of field channel (Andhra Pradesh)
An ex-ante informal strategy*

D. What are the limitations of this situation?

If we look at the process sequentially over time starting from the occurrence of the risk rather than from its identification we observe a two-stroke impact. In order to obtain immediate short term relief the poor has to sacrifice his long term development, his future.

⁴⁶ Rotating Savings and Credit Associations: an association formed upon a core of participants who make regular contributions to a fund which is given, in whole or in part, to each contributor in rotation (Rutherford, 1999)

Figure 9: Reaction of poor households on a risk event



Source: adapted from Cohen and McCord (2004)

It is clear that opportunities have to be created for and with the poor to limit this two-stroke impact on their livelihood.

The poor do have a portfolio of informal arrangements (Table 3) from which they can more or less select a response to the shock. Nevertheless, several issues make a large part of this portfolio unavailable, costly and/or ineffective.

1. First, *these strategies are rarely available all together* to and/or feasible simultaneously for a single household or for all members of the household, particularly *women*. These have fewer assets, and less control over assets than men but they are also limited in their ability to exercise their legal rights to these assets (Cohen and Sebstad, 2003). This limits their options for managing risk.
2. Second, the '*poorest*' often lack social and financial resources to adopt a large majority of the strategies: lack of assets, '*poor*' marriage, high child mortality, bad health, alcoholic husband, corrupt moneylenders etc. can all hinder informal risk management for the poorest. They regularly fall out of informal group-based systems since they often cannot keep up with reciprocal obligations and depend almost entirely on inadequate self-insurance mechanisms (Cohen and Sebstad, 2003)
3. Informal strategies – ex-ante and ex-post - are *costly*. They often lower vulnerability on the short term at the expense of higher vulnerability over the long term. A farmer

who sells his assets (livestock etc) to feed his household immediately gives up future income. Moreover, the accumulated asset can be lumpy and not easily converted and the value of the asset can be risky as well. Further, the use of diversification to handle risk is limited since crop failures lead to a collapse of the demand for all local services and crafts (Sen⁴⁷).

4. A study in East Africa led by Monique Cohen and Jennefer Sebstad⁴⁸ examined client perception and preferred mechanisms for reducing vulnerability. Using three criteria (Coverage, accessibility and timeliness) the research demonstrated that few existing mechanisms fully cover losses. People often rely on mixes of resources to cover the losses and thus incur high transaction costs and inefficiencies. For those with access to formal insurance **effectiveness seem also to be mixed**. Many users regard the claims processes to be burdensome, particularly for the illiterate. For many, insurance is linked to credit raising the effective cost of premiums.
5. Despite the fact that informal insurance can work reasonably well for a limited number of risks, we have seen that the access to them is far from being evident for everybody. But even if it was, they carry another problem related to **moral hazard and free riding**. A member could behave himself in a way that he increases his risk on purpose to get higher income because he knows he will be covered by the group. And he could even do that without participating to the risk of others by quitting the scheme prematurely.
6. For shocks with an **aggregate nature** - i.e. that impacts a large number of households simultaneously and in the same area (mass covariant risk⁴⁹) – many of the informal mechanisms for mitigating and coping with risks become ineffective (Skoufias, 2003). This is particularly true for the group-based informal mechanisms (Morduch, 1999). For example, when income generation is impossible, aggregate demand and employment falls due to a shock, being a member of an occupational association, ROSCA or Self-Help Group can be of little help if all the members are also affected negatively by the shock. The strain is then also put on market-based coping

⁴⁷ Quoted by Skees

⁴⁸ Monique Cohen is President of Microfinance Opportunities, a client focussed microfinance centre. Jennefer Sebstad serves there as a Project Director.

⁴⁹ Section I. 1.5

mechanisms such as borrowing from formal (micro-) financial institutions (Skoufias, 2003). For instance, when the majority of the MFI's clients are dependent on agriculture (70% of the poor), a hazardous event such as a flood or a drought that causes harvest failure has dramatic consequences. The deposits are withdrawn (Binswanger & Rosenzweig, 1986) diminishing the capital of the MFI and many credits are not repaid in time. This puts an incredible stress on the sustainability of the institution and on the access to financial services for the poor. The collapse of market-based informal mechanisms is also evident when the farmers attempt to sell livestock to make ends meet. Livestock prices will fall as supply exceeds demand. Similarly, when farmers seek off-farm employment in response to the disaster, the sudden rise in the labour supply will drive down market wages (Hess, 2003).

Therefore, it would be of the highest interest to find a solution to provide a risk management tool that:

- *Limits losses (first and second impact) for every subscriber in case of an aggregate shock, without harming the society*
- *Reduces the strain on informal mechanisms and thus leverages their efficiency*
- *Reduces the strain on formal institutions such as MFIs (credit & savings)*

The challenge is thus to provide a formal tool adapted to the needs of the poor and the poorest. In many regions formal risk management is not an option. Among the poor, insurance, for instance, tends to be viewed with distrust, largely out of ignorance (Cohen and Sebstad, 2003). "It is viewed as a province of the rich". The East African study reveals that few understand the basic concepts of insurance, the details of their insurance policies, or its effective cost. Education to insurance is indispensable to build understanding and trust in the adapted products.

Impact of the covariant hazard

Adverse shocks such as economic crises and natural disasters can lead to surges in poverty at the country level as shown by the numbers in Table 4. The frequency and severity of economic crises and natural disasters seem to have been increasing (e.g. Von Braun, Vlek, &

Table 4: Economic crises and poverty in selected countries (headcount ratios⁵⁰)

Country	Before crises	Year of crises
Argentina	16.8 (1993)	24.8 (1995)
Indonesia	11.3 (1996)	18.9 (1998)
Korea	2.6 (1997)	7.3 (1998)
Malaysia	8.2 (1997)	10.4 (1998)
Thailand	9.8 (1997)	12.9 (1998)
Venezuela	41.4 (1993)	53.6 (1994)

⁵⁰ It is the proportion of the national population whose incomes are below the official threshold (or thresholds) set by the national government.

Wimmer, 2002). The Centre for Research on the Epidemiology of Disasters (CRED)⁵¹, that collects data on the number of natural disasters, reports a clear increase in the numbers (Box 3). These findings confirm the importance to find answers to the impact of covariant hazard on people and on the most vulnerable of them, the poor.

The extent to which aggregate shock impacts on households' welfare is intimately related to their capacity to cope with shocks (Skoufias, 2003). We have seen that this capacity is low for the poor. When the capacity is there, the negative impact is more insidious. In many (all) developing countries public safety net programs are weak, malfunctioning or totally absent. Thus, the poor households will use strategies to cope with the consequences of the hazard. These ultimately will prevent them from ever escaping from poverty or from reaping the benefits of future economic growth (Skoufias, 2003). First, as detailed above, in order to survive, the poor may sell their productive assets such as draft animals, land or working tools. Depending on the degree of access to credit and other sources of financing and on the degree of indebtedness, there is a high probability that these households may never be able to replenish their stocks of productive assets and thus, will remain in poverty forever or at least for several years. Second, during a period of crises households may be forced to decrease their investments in the human capital of their children through their lower ability to provide proper nutrition and health care for their children (Alderman et al., 2002; Hoddinot and Kinsey, 2001⁵²) or by increasing the time of child labour compared to school attendance (Jacoby and Skoufias, 1997). Several studies (e.g. Glewwe, Jacoby & King, 2000⁵³) demonstrate that child malnutrition is correlated with lower school achievements, lower health as an adult and lower wages and productivity as an adult.

In consequence, the individual coping strategies provide limited relief for aggregate shocks and even increase poverty since they may transmit poverty from the current generation to the future generation. As shown by Owens, Hoddinott and Kinsey the reallocation of funds from an ex-post response to shocks (in particular the 1994-1995 drought in Zimbabwe) to an ex-ante intervention is successful at reducing poverty, while at the same time allowing households to build up additional stocks of livestock that help buffering consumption in the aftermath of the shock (drought).

⁵¹ cited by Skoufias (2003)

⁵² cited by Skoufias (2003)

⁵³ cited by Skoufias (2003)

The two first limitations stress the importance to provide better access to risk management. Points 3, 4 and 5 reflect the necessity of an *efficient formal* risk management tool. And point 5 reveals the need for a tool that could provide an answer to the impact of covariant risks that would limit losses and reduce the strain on informal mechanisms and formal institutions. The purpose is not to replace informal mechanisms or other financial services, but to leverage their efficiency. If the poor decide to retain the risk, management tools need to be provided to reduce or transfer the risk prior to the adverse shock, instead of coping with it and increase their vulnerability in the future. This is especially true for the poorest. In that way, the positive effects of risk will overweight the negative ones, impoverishment will be avoided and poverty alleviation stimulated. As a result, the basic process of the poor has to be upgraded.

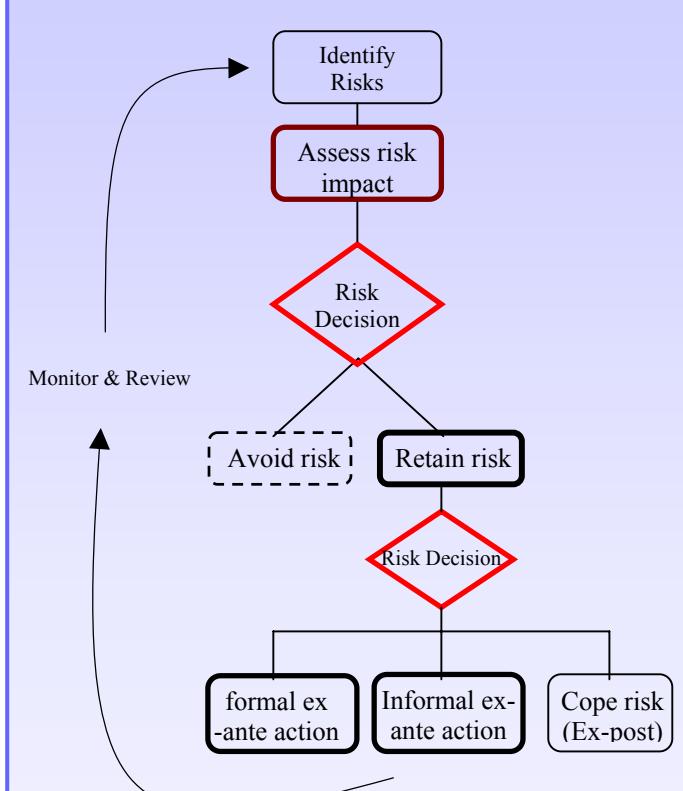
E. Transformation of the process

We have seen that the lack of resources, of access to alternatives and education lead them, in case of covariant risk⁵⁴, to

- Reactive attitudes (ex-post or coping) that have negative consequences on future generations and/or
- Proactive informal attitudes (ex-ante) limited by their effectiveness and by the possible negative impact of a hazard affecting all a community or region.

Alternatives have to be implemented to these outcomes, to avoid further impoverishment and reduce the existing poverty. It is essential that the purpose of new risk management mechanisms is not the replacing of informal mechanisms. This would lead to disappearance of self-constructed and participatory mechanisms essential to maintain the livelihood of the poor at a worthy social and financial level. Moreover, it would enhance dependency of the poor households to the new mechanisms and thus enhance their vulnerability. Their survival would be entirely dependant on the

Figure 10: Upgraded Risk management process of the poor



⁵⁴ for a definition see above

existence of a formal institution since the informal mechanisms disappeared. A new risk would appear, whereas the aim is to reduce the vulnerability of the poor. Instead, the new formal mechanism, which answers to a real need of covariant risk management, must encourage independency.

The formal mechanism detailed below will need to diminish the strain on informal mechanisms and thus increase the quality and quantity as well as the frequency of their use, especially for idiosyncratic risks. Eventually, the poor will be less dependent on more costly mechanisms. The dependency on credit can also be limited thanks to the diminishing of the effect of indebtedness spiral caused by adverse shocks. The credit will be used more efficiently by reserving it rather for growth purposes. As a result the households will be better able to retain, reduce, transfer or share risk. Being more capable to retain the positive effects of risk (higher returns), the poor will have less the necessity to avoid the risk.

In addition, it has to be kept in mind that the process remains a cycle. Monitoring and reviewing must be carried out to close the loop, because risk exposures change with time and activity evolutions.

In short, new ex-ante opportunities can emerge and the existing opportunities are made more effective. Finally, most important, the poor acquire the power to make their own choices among new accessible opportunities, tools. Consequently, impact of hazard is reduced and poverty can be alleviated substantially and on the long term.

Can public risk management not do this?

At this stage you could argue that governments exist to take care of the risks that affect large part of the citizens. Why may they not provide covariant risk management?

The *first* reason is very pragmatic: because they simply don't do it. With more nuances, the majority of governments whose citizens are the most vulnerable (LDC) do not provide access to these services, or do, but not efficiently (the case of India is detailed later).

Secondly, it has always been a big problem to identify the adequate target of the programs. As we have seen, poverty is a dynamic phenomenon. The people move in and out of poverty periodically since their income is volatile. The chronic poor are more easy to target but for the transitory poor it is far more difficult and costly (Grosh, 1994). Programs that target chronic poor do not necessarily reach the people that can be affected by adverse shocks.

Thirdly, public assistance under the form of natural disaster relief fund (insurance type) seems to play only a limited role in helping the poorer households (Morris and Wodon, 2003). The

nature of the emergency aid is questioned. Emergency aid, for example, consists mainly of food, clothing and medicine while the need for these goods is relatively similar between households. Therefore, there is only limited scope for providing ‘more’ relief from this type for those who suffered greater losses or who are poorer following a disaster (Morris and Wodon, 2003). Nevertheless, well targeted cash transfers seem to offer a quick and flexible alternative distributed at lower administrative cost than goods transfers and with easier tailoring (Skoufias, 2003). Recently, a number of countries (Bangladesh, Brazil, Colombia, Mexico, Honduras, Jamaica and Nicaragua) have adopted this kind of programs targeted to the poor and conditioned on households investing in the nutrition, health and education of their children.

In consequence, public risk management for covariant risk is not excluded. It should only be better adapted to the needs of the households. It is certainly necessary for the biggest catastrophic risks happening every 50-100 years⁵⁵.

The need for new efficient formal risk management tools especially for covariant risks that would be able to mitigate the risk has been found. The most common way to reduce covariant risks is to transfer it through insurance.

F. What is Insurance?

The place of insurance in the risk management process has been established as a strategy of risk transfer. A known cost (premium) is exchanged for an unknown cost (loss) in a specified period. A recent approach is to consider insurance under the form of an option (Neufville, 2001). For example, in paying the fee to a company providing fire insurance, the buyer acquires the right to sell the damaged property at a fixed price (put option). In practice, however, the buyer will not sell the property but simply receives the value of the losses.

Various insurance schemes exist and can be categorized according to their nature⁵⁶:

- *Public*: public welfare, national insurance and/or social security
- *Private*: life assurance, pensions, property, fire, theft, crop etc.
- *Mandatory*: taxation for national schemes with protection available to everybody. Also obligatory insurance
- *Macro*: Macro-insurance schemes are large-scale insurance provision set up to protect a sector of the economy: e.g. the controversial India State Crop Insurance Scheme. They may be financially independent or subsidized and are considered to be an effective tool to reduce the impact of hazard on

⁵⁵ See categories of agricultural risk in Section 1.

⁵⁶ adapted from Charles van Oppen (2002)

⁵⁷ Institute of Chartered Financial Analysts of India

required for certain activities such as auto or employer's liability.

- *Voluntary*: the choice of insurance is up to the individual
- *Formal*: Insurance is provided by insurance companies, government relying on legal enforcement of policy conditions (ICFAI)⁵⁷.
- *Informal*: These types often go beyond definitions and include group coping strategies. For example, mutual aid against income shortfalls, reciprocal lending, gift aid and savings club.

governments and economies.

- *Meso*: Meso-insurance is here defined to include all the conventional schemes available to most people in developed countries. It includes insurances provided by the international insurance markets covering marine, energy, aviation etc. where assets values and risks are very high.
- *Micro*: Micro-insurance is the generic name for insurance products and services for and with the poor. Section II of this paper is aimed to investigate whether it is a valuable tool for reduction of the above described poverty in light of the microcredit movement.

The type of insurance that will be used more or less frequently depends on the social and political context. For instance, in the developed countries more formal insurances are available because the schemes are based on reliable and accessible legal systems. In developing countries insurances rely more on social sanctions.

Developing countries also have their unique context often with governments inefficient to provide social security, with regulations that limit the access to specific sectors for new companies, and with a majority of poor households with needs that differ from those of the traditional clients. Therefore, adapted insurance schemes have to be implemented for and with the poor. This movement is called **microinsurance**. It is a system to protect poor people against specific shocks using risk pooling in return for regular affordable premium payments proportionate to the likelihood and cost of the risk involved. The context of the developing countries lead to the choice of private or semi-private formal microinsurance since we have seen that informal mechanisms *on their own* are not effective enough to alleviate drastically poverty and certainly not when a disaster occurs.

G. Characteristics of insurable risk

If insurance is so effective, why do we not insure everything? Well, not every risk is insurable or insurable in the same advantageous conditions. The party to which the risk is transferred needs to have substantial certain benefits for the risk taking, which are not guaranteed for every risk. Van Oppen documents six characteristics for insurable risks:

1. *Capable of financial measurement (tangible risk)*: The reason is that only the financial loss must be covered by the insurance. Historical data of the risk is usually required to predict future losses and limit information asymmetry.
2. *Large enough number of similar independent risks*: We have seen that the principle of insurance is that those that do not incur losses related to the risk pay for those that do incur losses.
3. *Policyholders must be ‘average’*: Sometimes only people with above average or high risk contract insurance (**‘adverse selection’**). If it is the case that only highly vulnerable people buy the insurance the claims will be high and consequently the cost of covering will be very expensive or the scheme will stop.
4. *The risk will be preferably ‘incited’ or ‘particular’*: This is personal in its nature as opposed to a fundamental risk (see section I).
5. *The loss must be hazardous as far as the insured is concerned*: The insured must not have an influence over the occurrence of the insured event that would allow him to take increased risk or follow bad practices because anyway the risks are insured. It would lead to increase in claims, harmful for the sustainability of the service. This phenomenon is well known under the concept of **‘moral hazard’** (e.g. a farmer because he is insured chooses not to attend his/her crops properly).
6. *The premium must be reasonable*: The premium has to fulfil two criteria. It needs to be affordable for the insured and sufficient to cover the losses transferred to the insurer, overhead costs and make a profit (if the insurer is for profit).

What appears is that if all these characteristics were strictly applied to the selection of risks, very few of them would be selected for insurance. This is not automatically the case. The limitation of the characteristics is obvious since no hazard situation is identical. In fact, the risk characteristics will more affect the underwriting conditions and the design of the insurance. Innovation exists in this sector to go beyond the limits imposed by common principles. Thus, the characteristics are not totally exclusive towards risks but rather serve to point out some problems. For instance, it can be considered, in the light of the proposed characteristics, that hazardous events affecting large number of people simultaneously (disasters) are uninsurable risks. However, adapted mechanisms (design, service, implementation etc.) can make this risk insurable. The insurer will find some protection with for example multi-regional covering, reinsurance or making the insurance mandatory to avoid the risk of adverse selection.

H. Illustrations of the Insurance Concept

The first illustration is provided to evaluate insurance against credit and savings for protection against risk.

Insurance aims to protect people from a probable catastrophic loss. Manish is a 24 years old Indian. Suppose he has 1 chance in 10,000 of experiencing severe illness or injury. It would result in a hospital bill of € 2,000 in any given year. If this hospital bill were spread over all 10,000 people, then on an average, the expected annual loss for each person would be $(€2,000) \times (0.0001) = € 0.20$ for insurance that would cover such catastrophic loss. The low probability loss of € 2000 is transformed into a certain but small €0.20 annual loss. Thus, if an insurance company could assemble 10,000 customers with this loss probability (!) and collect €0.20 from each of them it would be prepared to incur the loss of €2,000 a year. But, in fact, if they want to survive on a profitable basis each person should maybe pay €0.40 per year.

To illustrate the clear advantage of insurance as protection against large, uncertain risks as compared to credit and savings (Brown and Churchill, 1999), let us expand the example. Manish still has the same risk of illness or injury. If he relies on savings for protection against the €2,000 loss, he would need to put €40 a year under the mattress for 50 years or a little less at a bank if he gains interest. He will finally achieve at the end of his life (74 years) the protection that would otherwise have been available every year if he had bought the insurance at a cost of €0.40 a year (for a total life premium of €20). If he relies on a credit of €2,000 to cover his medical expenses, assuming 8% annual interest and no compounding of interest, he would need to repay €163 a year over 50 years to repay the loan while the credit does not produce additional income. It is clear that in this case it is preferable to purchase insurance than to rely on credit or savings.

In consequence, it is partially to allow the poor - the most vulnerable - to have access to a similar protection system, less costly than credit or savings (for risk reduction), that insurance for the poor – microinsurance - is further investigated below.

With the second illustration a major issue faced by insurance can be clarified. It is related to the difference between independent and covariant risks. As developed above, a very large part of the poor are situated in rural areas and depend on agriculture. Among the predominant risks impacting their incomes is the climatic risk which is covariant. Consider now two villages. Both villages have 30 households. In an average year each household expects to receive US\$ 1,000. Households dispose of three income earning activities: Crops, livestock and off-farm labour. In village 1, all three outcomes of income will all occur in a single year. In other

words, risk is independent. So, 1 in 3 years the income of one household is either \$0; \$1,000 or \$2,000. In village 2, all households get the same income in the same year (0, 1000 or 2000) – correlated risk. The goal is to avoid impoverishment. No household should have less than \$1,000 of income in any given year. In order to reach the goal for village 1 let us go through three options. One option could be through a social agreement. If I get \$2,000 in any one year, I will give households getting 0 half of my earnings, i.e. \$1,000. A second option would consist of a banking agreement. When I get \$2,000, I deposit \$1,000 in the bank. Those getting 0 can borrow the \$1,000. Finally, the goal for village 1 could be achieved through an insurance agreement where everyone pays a premium *ex ante*. For previously explained reasons we retain the last option. The funds are pooled and individuals getting 0 are paid. With a premium of \$333 paid by the 30 households the fund reaches \$10,000. Since 1/3 or 10 households get 0, the pool works because there is enough to pay (assuming that the insurance contract is efficient). In village 2 with covariant risk, pooling the risk is impossible. In any given year all households can get 0 income, \$1,000 or \$2,000. In the first case there is no opportunity to help each other. However, if the insurance is well designed, covariant risk can be insured. For instance, when the risk is spread over several villages from type 2 not too much correlated to each other. Further, in reality households' incomes are not completely independent neither completely correlated (J. Skees, 2003). Financial and technical innovations could lead to an answer for covariant risk management. If we knew that the 0 outcome for everyone was clearly associated with, for instance, lack of rainfall, one could write an insurance that would pay when there is a lack of rainfall. The risk can thus be spread over time rather than only over space.

Need for Innovations

As the context of this paper has been placed in rural poverty and especially with covariant or correlated risk as principal focus, innovations presented here have to be considered within this context. Innovation in risk management for the poor begins with the access to microinsurance. But this is not enough because the way to have access to insurance needs to be innovative.

Financial innovations must be found to reduce the impact of covariant hazard. Some indices exist for weather markets, index based insurance, catastrophe bonds and blending capital markets with reinsurance markets. These are going to be developed later on and can be exploited fully and most efficiently along with technical innovations; satellites measuring weather or proposing images on vegetative cover, ground level real-time weather, computer models giving early warnings etc.(Jerry Skees, 2003).

In conclusion, we have observed the need of the poor and the utility to have access to risk management tools. Microfinance institutions are in a privileged situation to address this challenge. Two questions have to be addressed next: whether microinsurance is the right solution to match this microfinance (r)evolution; and, if it is, how...?

I. Conclusion

The initial question is: “How can the problem of risk be solved to alleviate poverty?” An answer has been found. The risk management process of the poor has to be transformed or completed. The poor are very vulnerable but have little or no access to efficient risk management strategies. Informal strategies showed serious limitations and covariant risk causes huge impacts on the livelihoods of the poor as well as on the efficiency of existing informal mechanisms and other formal financial services such as credit. Note that the purpose is not to replace informal mechanisms or other financial services, but to leverage their use. The transformation of the process operates by giving access to new opportunities. In this way the poor are empowered through the possibility to make choices. The new opportunity that is proposed to reduce the impact of covariant risk should be an efficient formal risk management tool. Insurance could be one of them since it is less costly than savings and credit for risk reduction, i.e. microinsurance. It works by pooling the risks. However, covariant risk seems a priori uninsurable. Therefore, first, only small systemic disasters and systemic disasters should be considered. The biggest catastrophic risks occurring every 50-100 years should still be covered by governments. Second, financial innovations must be found to reduce the impact of covariant hazard through sustainable microinsurance. Some indices exist for weather markets, index based insurance, catastrophe bonds and blending capital markets with reinsurance markets.

CHAPTER 2. | The MicroInsurance Promise?

So far, the need for risk management for the poor has been demonstrated starting from the poor and their risks. The benefits of risk management appeared clearly through the clarification of its concept. Insurance has been proposed as a path to explore to reduce risks and more particularly for the poor, i.e. microinsurance. It is a system to protect poor people against specific shocks using risk pooling in return for regular affordable premium payments proportionate to the likelihood and cost of the risk involved⁵⁸. In the following chapters I investigate how microinsurance complements the inefficiencies of other services and whether it really carries the promised benefits for clients and MFIs.

A. Where does demand for ‘microinsurance’ arise from?

The need for the poor to manage their risks has been largely documented above. *Our interest now moves to the reasons why the poor could not simply be satisfied with informal mechanisms or buy conventional insurances and why microcredit and savings are not sufficient to satisfy their need.*

1. Gaps in informal insurance

We have documented above the limitations of the informal risk management tools that should lead to new risk management tools. The same limitations are applicable to informal insurances. These rely mostly on networks such as family, friends, religious communities (churches etc.). They work reasonably well but are limited in their scope. Access depends on belonging to communities or better-off families. A lot of people are thus excluded, particularly the poorest.

Moreover, for shocks with an aggregate nature (mass covariant risk) many of the informal mechanisms for mitigating and coping with risks become ineffective (Skoufias, 2003). This is particularly true for the group-based informal mechanisms (Morduch, 1999) such as informal insurance. For example, when income generation is impossible, aggregate demand and employment falls due to a shock, being a member of an occupational association, a ROSCA or a Self-Help Group can be of little help if all the members are also affected negatively by the shock. Natural disasters affecting hazardously whole villages or even regions may put significant strains on informal insurance schemes that in normal circumstances are quite

⁵⁸ CGAP Donor Working Group on Microinsurance (2003), “Donor Guidelines for Funding Microinsurance”

effective. The strain is then also put on market-based coping mechanisms such as borrowing from formal (micro-) financial institutions (Skoufias, 2003).

Therefore, formal insurance could reduce the strain on informal mechanisms and thus leverage their efficiency. Families and communities whose members would be formally insured against fluctuation of incomes due to one or several risks could be more capable in insuring informally risks that are not insured formally. This is particularly true if formal disaster insurance is provided.

2. Gaps in conventional insurance schemes

Why could the poor households not simply cover themselves by joining the schemes proposed by common insurance companies? The same question had risen for credit taking. The answers are quite similar but not entirely.

- There ‘was’ the similar wrong assumption that the poor do not insure against risk or do not need to do so. It has been made clear in the previous sections that this is not the case. They do use risk management tools and informal insurance mechanisms. And when they do not it is a question of lack of access or sometimes capability (destitute, ignorance). However, it seems now that insurers throughout the world are showing interest in the micro market but are not yet able to do so due to access difficulties (McCord, 2003).
- There was another wrong assumption that the poor are ‘automatically’ bad risks imposing exceedingly high information monitoring costs on operation. Insured people will always be more knowledgeable about their risk than insurers. It is certainly not different for the poor. This makes it difficult for insurers to separate them in low- and high-risk groups, raising the possibility that only high-risk people will take the insurance, i.e. *adverse selection*. In addition, once insured, people have fewer incentives to control their risks, leading to higher losses for the insurance company, i.e. *moral hazard*. These have to raise rates, invest in costly monitoring mechanisms and require collateral (Hess, 2003). Premiums are increased and demand for insurance is reduced since access is made less affordable. Although, the reason is that the *schemes are not adapted to the particularities* of the poor and not that they do not need it or can not bear the responsibility.
- Insurers dislike small premiums since each client involves fixed administrative costs. In order to reach the same amount as for better-off people the insurer needs to serve more clients and thus incurs higher administrative costs.

- The poor are often located far away from the insurer branches making **physical access difficult** and costly. Costly, because high transportation costs and the loss of wages caused by absence from its work lead to a decrease in the income of the conventionally insured.
- The lack of literacy makes insurance a dreadful experience. Insurance is a complex contract particularly for those that never received sufficient information. The purpose is often not understood because **not clearly presented**. Some people wonder why their money is taken if they do not get it back. Thus, they stop paying the premium or do not make the claim when the risk occurs.
- Finally, government risk management programs may crowd out private sector risk management (Hess, 2003). Governments may mitigate risk for example through price stabilisation, drought relief and subsidized crop yield insurance. Programs are often all-risk insurances that absorb large sums of public resources with little evidence of positive effects. On the contrary, they have led to excessive risk taking of farmers and a growing dependency on disaster relief (Skees, Hazell and Miranda, 1999)

Thus, apart from a few wrong assumptions, real reasons do exist to avoid insurance services for the poor. The risks of the poor are considered to be above average, and either to be too fundamental in their nature or too much under influence of the poor. However, many risks faced by the low-income clients served by MFIs are insurable and in these cases, well-designed microinsurance products can have an important development impact (Brown, Green and Lindquist, 2000). In reality, the problem is information asymmetry. Conventional insurance companies know little or nothing of the poor and their livelihoods. The difference with microcredit is here that the big insurers show interest in microinsurance and would be glad to find a way to concretise their interest.

In short, there seems to be room for a new program that would fill these gaps by adapting insurance schemes to the particularities of their clients, here the poor. Therefore, looking at how other financial services succeed in this can teach a lot to microinsurers. The emergence of microinsurance out of conventional insurance is possible by using mechanisms learnt from the microcredit movement.

3. Gaps in microcredit and savings programs

Microinsurance is inspired by microcredit schemes and thus relies partly on similar mechanisms. But microcredit has proven to be in general an efficient poverty reduction tool

(Section I). We examine here why, then, microcredit is not sufficient to satisfy the need for risk management and thus why microinsurance is necessary to complement microcredit out of its limitations (Section I) along the demand and supply sides.

- Demand side

We have seen that microcredit has two main effects: increasing income and decreasing vulnerability. Loans are thus used for production but also for consumption and income smoothing. Microcredit, when accessible, still has a cost, especially the **risk of not being able to repay due to unstable incomes or the impact of hazard**. This risk creates two reactions among the poor. Some will exclude themselves and thus lose an opportunity to escape poverty. Others will choose to take the indebtedness risk. The bottom-up poor have more social resources and access to better risk management that will allow them to invest in risk profiles delivering high returns. Because in case of hazard they are better able to cope with it. Their income increases thus more sharply. The poorest (bottom-down) do not have as much risk management opportunities. They will adopt low-risk profiles in order to manage their credit risk. As a result their income does not increase since the return of their activity is low. In this case microcredit does not help enough in poverty reduction. *Access to insurances that would reduce the impact of hazard on their earnings can assure the poorest more stable income and thus higher risk taking. In that case, the microcredit will be leveraged to provide significant income growth.*

In both cases, for the poorest as well as the better-off, **covariant risk** remain a problem even when taking micro loans. Hazardous events that have an impact on all the community can lead all the clients in an infernal indebtedness spiral. Indeed even the better-off lose then their risk management tools. The goal of poverty alleviation is then far from achieved.

On the other hand, you could wonder why *savings* services could not serve as alternative risk management tool. Actually, they can, but for specific purposes. For example, expenses such as dowries or school fees are likely better served through savings programs (Brown, Green and Lindquist, 2000). *In fact, for a large part of the normal lifecycle events the poor can protect themselves with savings. But once the impact of an event outstrips a certain level savings become insufficient or very expensive.*

The illustration given previously, in chapter 1.8 page 63, for clarification of the concept of insurance shows the clear advantage of insurance over credit or savings for the protection of the insured against risk. **Microinsurance can be far less costly** in resources as in time for protecting certain risks.

- Supply side

(1) **Repayment rate** – As noted before, getting reimbursed is a main preoccupation of the MFIs and financial institutions in general. The poor being more vulnerable the chance is greater that their income follows an unstable or cyclical evolution. Therefore, regular repayments or repayments in general are more threatened. Several innovative mechanisms have been developed by MFIs to achieve repayments at very high levels.

We have seen that a particularity of microcredit is that the repayment process begins before investments bear fruit. These weekly repayments necessitate that the household has an additional income source on which to rely. On the one hand this operates a positive selection of clients for the lender. On the other hand it limits outreach and the mission of poverty reduction. It implies that households that have a single source of income will have much more difficulties to access capital provided by MFIs. These households are mostly present in areas focussed sharply on highly seasonal occupations like agricultural cultivation. Morduch thus argues that **seasonality** poses one of the largest challenges to the spread of microfinance in areas centred on rain fed agriculture, areas that include some of the poorest regions of South Asia and Africa. The instability of their income makes them very bad clients for schemes that require regular repayments. Insurance instruments could provide income smoothing for extreme instabilities as well as new opportunities for diversifications since risks are reduced. In addition, the actual trend amongst them of reaching sustainability implies maintaining the repayment rate at the same level over a longer period while keeping the same clients. The longer the period, the higher the probability that hazard affects the borrowers so that repayment becomes impossible. The sustainability may then be seriously threatened and lead to capital squeeze. In consequence, insurance of their borrowers could provide MFIs protection for the repayments and better guarantee of sustainability while pursuing their mission of poverty reduction. In short, microinsurance plays the role of substitute to collaterals.

It has been said previously that microcredit models rely often on collective responsibility. However, collective responsibility does not mix well with voluntary **savings**. In the group, everyone knows how much the other saves. If a member has a repayment problem he will have a greedy eye toward the voluntary savings of another, or the loan officer, striving for perfect repayments, may encourage this to occur (David Gibbons⁵⁹). This possibility discourages voluntary savings while collective responsibility is indispensable to reach the

⁵⁹ Cited in the MicroBanking Bulletin, September 2000.

poor. Insurance could avoid a number of repayment problems and thus decrease negative incentives for voluntary savings.

As microinsurance fills gaps left by microcredit and savings on the demand and supply side, microinsurance is rather outlined as a complement to, rather than a substitute for both, in protecting the people against risk.

The thought that providing insurance to the poor will permit to assure higher repayment rates and thus better sustainability is essential but should not become the goal of providing microinsurance. It would be a supply-driven goal in contradiction with the demand-driven approach of microfinance. The goal is the reduction of the risks of the poor by transferring some of them. That gives them the opportunity to enhance the productivity of their microcredit and finally alleviate their own poverty.

(2)High deficiency in rural areas – The failure of informal and conventional insurances preserves high yield risks and disadvantages farmers in dealing with the numerous other risk sources deriving from markets, policies and institutions (Siegel and Alwang⁶⁰, 1999). For instance, weather risks can be linked to price fluctuations, especially when the natural hazard has a broad spatial spread (Hess, 2003). Production risks are also triggered and exacerbated by health, institutional and political risks. Not only the livelihoods of the farmers are hurt by these uncertainties but the development of the financial markets is also impeded. This leads to an infernal circle. When formal lenders realise that income of farmers are subject to large risks they will either ration credit either charge higher interest rates to cover their risks. Without access to affordable credit, new technologies and new farming systems are delayed by the farmers, and they keep relying on inefficient and costly informal risk management strategies. Therefore developing microinsurance would not only benefit to farmers and previously unbankable exposed people but also to financial markets and thus to all rural poor.

B. Which are the Benefits and Costs for the Demand side?

The Risk management process made clear that risk entails making a risk decision which may be based on a decision-making model using cost/benefit analysis. Hence the importance of identifying costs and benefits.

- **Benefits**

It is essential to have a demand as well as supply but if the interaction does not provide enough benefits (direct and indirect) to the demand, the supply has little reason to exist.

⁶⁰ Quoted by Ulrich Hess (2003)

The Microinsurance:

- Stabilizes incomes: financial uncertainty is replaced with a fixed cost (premium)
- Protects human capital by enabling households hit by a shock to continue paying the education fees and medical treatments (Mosley, 2003).
- Protects social capital by preventing groups, including families, from breaking up due to stress of over unpaid debts (Mosley, 2003).
- Improves client's position in relation to obtaining credit. It acts as a collateral substitute. For example, life insurance provides guarantee to the lender to recover the outstanding balance. It enables people depending on a single income source to participate in microcredit schemes as well as people subject to cyclicalities. An increase in access to microinsurance entails an increase in access to microcredit particularly for the poorest.
- Better outreach of microcredit to the poorest participates to reduce huge inequalities.
- Increase the returns and the formation of capital by giving new opportunities for higher risk-taking. For instance, farmers may try more valuable crops instead of planting subsistence crop only.
- Steadies and even reduces the cost of production of agricultural and industrial production by stabilising risks in the long run (Oppen, 2002). Certain losses are mitigated thanks to the recovery of the claims.
- Stimulates production through surge in investment. For instance, in the insurance illustration provided, Manish should put €40 a year under the mattress for 50 years. Instead he spends only €0.40 a year on insurance. €39.60 are thus freed for more productive activities
- Simple access to microinsurance empowers the poor by giving them the opportunity to make their own choice amongst risk management strategies. This is particularly true for women.
- The stability of income maintains and stimulates consumption. The security provided by insurance evolves higher confidence of the insured (Oppen, 2002).
- Encourages self-help actions and promotes cooperation as well as other informal mechanisms by reducing the strain in case of disaster.
- May relieve the State, to a large extent, of the irregular financial burden of providing relief and distress loans (Oppen, 2002) in case of small and medium disaster.
- Relies on existing mechanisms and institutions of microcredit which the poor know and trust.

- Helps maintain the dignity and living standards of members who would not have to depend on State handouts or hated moneylenders in the event of a disaster.

Indirect benefits (e.g. income stability, ability to obtain credit, consumer confidence etc.) just as much as direct benefits (e.g. recover the loss) improve the insured's ability to prepare for and mitigate the impact of hazard. Further, it has to be noted that much of the benefit from insurance, and therefore the demand for it, has an impact on all the people, not only those who purchase the insurance (Mosley, 2003). The resulting reduction of poverty and inequality and the reduction of the risk of a large part of a community concern everybody.

- *Costs*

Most of the costs are related to the underwriting conditions. They depend on the insurer and the insured goods or persons.

- Payment of a premium. The premium can be relatively high if adverse selection and moral hazard are above average or if it is linked to credit.
- Risk of insurer collapse
- Acquire information for understanding of insurance
- Making a claim when risk event happens
- Delay between risk event and claim reimbursement

However, some of these costs related to claims settlement are avoided with adapted and innovative insurances such as index insurance (see later).

For the potential customer, the poor, the benefits seem to outstrip largely the costs provided that insurance is well designed and accessible.

C. Which are the benefits and costs for the supply side?

The same reasoning as before can be held for the supplier of the microinsurance. If the supply side does not count enough pro's the service will not be provided and demand will remain unmet. Benefits and costs are here examined in regard to the challenges and weaknesses encountered by microcredit schemes (Section I). For the general case let us assume first that microinsurance is fully provided by microfinance institutions. Alternatives will be discussed later.

- *Benefits*

- Many institutions have set poverty reduction in their **mission** statement. As demonstrated, microinsurance could participate to that. The benefice for the MFI would then be the achievement of the mission. The mission representing the ultimate goal of an

organisation, its achievement if obtained in good conditions should be considered as a key benefit.

- Financial services can be further expanded using the principles, standards and modalities that have proven to be effective. So that the microcredit activity is better sustained since microinsurance helps for higher repayment. Microinsurance thus gives more potential to **scalability through sustainability**.
- Microinsurance enables expansion of microcredit to people who were excluded. Either their high risk profile qualified them as credit unworthy or they excluded themselves due to their risk. For instance, people with a single income source are much more willing and able to take a loan while this source is less vulnerable to hazard. Scalability becomes possible towards the excluded and the poorest through **better outreach**.
- Microinsurance participates in broadening the resource base and by taking advantage of the existing channels it can lower the administrative cost per borrower. This, in turn, enhances **capacity building**. Further, it provides an attractive initial positive cash flow.
- It participates as well in the powerful **leveraging effect** of donor and state funding initiated by microcredit.

- *Costs*

Microinsurance becomes an attractive product for MFIs. More and more of them will try to enter the market to collect the promising benefits. However, several costs and risks are associated.

- It has been made clear that insurance is an *entirely different business* than microcredit or savings. It requires significantly different institutional capacity, skills, and experience. Risk management techniques are very specialised and high analytical skill are indispensable (McCord, 2003). Further, the **risk structure** of insurance is different from that of credit.
- There is also a cost related to the potential bad design of the product. When the insured has a loss and it is not compensated sufficiently by the insurance to cover the loss the mission is certainly not achieved. When the insured does not incur a loss and even though receives an indemnity then an additional cost appears for the MFI. This problem is called the '**basis risk**' (Skees, 2003). The MFI need to minimize '*basis risk*' by assuring an optimal correlation between rainfall and yield.
- The implementation of the **capacity** to deal with these differences may turn out to be expensive. Among the additional costs are: education to insurance principles and

products for clients and staff; collection of historical information; construction of estimation models; hiring of specialised employees; vulnerability to moral hazard etc.

- **The mix of insurance provision and financial services is dangerous.** Indeed, in most countries, different organs of governance supervise banks and insurance companies. The separation of both businesses was motivated by the concern that losses from non-banking businesses would negatively affect the banking business and put deposits at much greater risk. Even if today the process has been reversed thanks to advances in technology and progress in organisation, the mix remains explosive particularly for unsupervised and often more hazy organisations such as MFIs. (McCord, 2003). Consequences can be very costly and even fatal for the MFIs.
- Before going into the insurance business, the institution that follows sound business practices has to **assess** fully and honestly its capabilities and undertake a comprehensive risk analysis (McCord, 2003). Of course, it involves additional expenses, but not doing it can be far more costly.
- Microcredit providers may experience a loss of clients on the short term, i.e. **cannibalisation**. A considerable share of the clients take loans for income smoothing in case of cyclical revenues or for emergency purpose – “emergency loans”. In the future these clients will have access to insurance to answer the same needs more effectively. However, in the long term the improvement in livelihoods of a community will profit also to formal lenders. Moreover, the wider outreach of microcredit possible with joined microinsurance can certainly counterbalance the loss.
- Few MFIs are regulated for their credit and savings activities and the vast majority is not supervised at all (McCord, 2003). Corporate governance mechanisms such as boards and internal and external audits are very rare. On the contrary, in almost all countries being an insurer requires coming under **regulatory control**. Moreover, any organisation would operate illegally if it holds insurance risk without a license. The license acquisition as well as the adaptation to regulatory requirements involves a high amount of work, time and money.
- Many MFIs experience difficulties simply in offering their core product – credit (McCord, 2003). Therefore, **focus** was set as an essential characteristic in the MFI sector. Expanding their product range may divert their focus into too many aspects and increase difficulties of sustainability.

In conclusion, MFIs that would provide microinsurance can theoretically gain high benefits. Nevertheless, the associated costs essentially due to a lack of capabilities and resources in that field are potentially considerable. The risk for MFIs is significant. Further, they risk the capital and confidence of the poor. These organisations are often still vulnerable and should not sacrifice their credit and savings activities since these participate to poverty alleviation. Consequently, our initial assumption that microinsurance is fully provided by microfinance institutions has to be revised so that other provision models are to be investigated.

D. Which Provision Model?

Five models for delivering microinsurance can be distinguished according to Monique Cohen and Michael J. McCord.: partnership model, community based model, provider model, social protection model, and full-service model.

The first one is the “partnership model”. Major insurers⁶¹ are interested nowadays in micro markets but face difficulties with client knowledge and access. These defects are precisely capabilities of MFIs. The partner-agent model proposes a paired combination of a major insurer and a MFI (or other, such as NGO). The insurer would develop the product and bear the insurance risk. This limits the capital investment by the MFI. The MFI would provide access to low-income markets and its understanding of the market to adapt the scheme to the needs of the poor. The provision to the clients is thus facilitated. The product can be launched quickly since both sides have already the resources needed in place (Brown, Green and Lindquist, 2000). MFIs have eliminated the risk of insurance, the administrative burden is minimized and little additional management capacity is required (Cohen and McCord, 2003). As a result several of the costs are avoided while benefits still present since the MFI can earn commissions and stabilize its revenue stream (Brown et al., 2000) by facilitating customer interactions for the insurer. The insurance company gains access to new markets with lower transaction costs. The problems of focus, regulation, inexperienced business, capacity and so on are all resolved for the MFI. Finally, there is no need for donors to pay for MFIs or other NGOs to become insurance companies because private expert capacity is available. The client will get a better product at lower cost (Brown et al., 2000).

Nevertheless, there are often a limited number of potential partner insurers. Further, the MFI has to make sure that the claims are paid rapidly because many conventional firms pay little

⁶¹ AIG, Allianz, AXA, ICICI Lombard insurance in India, as well as national insurers like the National Life and General Insurance Company of Nepal and the Gemini Life Insurance Company of Ghana (www.microinsurancecenter.org)

attention to smaller claims. Finally, MFIs should be careful to negotiate an equal and satisfactory partnership in which both profitability and responsibility are balanced for both partners (Brown, Green and Lindquist, 2000).

The second model is “community-based”. This model relies on mutual insurance schemes. Local communities form groups that capitalize and manage a risk pool for their members (Cohen and McCord, 2004). Some problems arise with this model. They are related to the conflict between a limited management capacity and the need for a large population of insured.

Another possible model is the “provider model”. It prevails essentially for hospitals and clinics that create prepaid or risk pooling coverage for people at their facilities. MFIs such as ASA and Grameen use this model but manage their own clinics.

Fourth, provision of insurance may happen through “social protection models”. Here, national governments are the actors. They often underwrite cover for certain risks through social insurance programs such as with health care, crops and livestock, and covariant risk. Past public sector interventions to provide insurance and enable the poor to cope with a shock have typically failed. The response of government to disasters has always been subjective and has lacked precise criteria for what triggers insurance payment thus leading to high political interference and little opportunity to obtain reinsurance (World Bank). Consequently, comprehensive publicly supported crop insurance schemes have been disastrous, being both ineffective and fiscally burdensome. Heavy subsidization of premiums, large delivery and service costs and high aggregate losses, have been involved. Public crop insurance is typically all-risk, covering all or a majority of the supposed production risks (WB). Payments are assured for any shortfall when yield declines below a level set in the policy (Gudger, 1991). This mechanism encourages clearly excessive risk taking or moral hazard such as growing crops in high-risk regions and is thus expensive for society.

Finally, provision can be done entirely by one organisation (e.g. MFI, conventional insurer etc.). It is the “full service model”. A conventional regulated insurer may downsize its services directly to the low-income market. As assumed in the previous chapter MFIs may also assume the role of insurer with the high costs and risks that it entails (II 2.5). However, some basic products are good candidates for this model. Basic credit life insurance is certainly one of those as it protects the loan portfolio of the institution. The provision is most easily

done if the benefits are limited to the coverage of the outstanding loan principal and interest (McCord).

In short, models are differentiated by which party absorbs the insurance risk: local villagers, MFIs, health care facilities or regulated insurance companies (Cohen, 2004). No single model suits all needs. Every situation will have its own solution. Nevertheless, the partnership model shows the most benefits for covariant risks since the insurance risk is not supported by society or by organisations with limited management capacity, but by regulated private insurers. These have the expertise, access to reserves, reinsurance and are supervised. Outreach towards the poor is then the best guaranteed by the MFI or NGO. By doing so, the challenge identified for microcredit of “strengthening the link” with the private sector can be met.

E. Role for non-financial services

The possibility to expand insurance services has always encountered difficulties. So, to increase the scope of application and success of microinsurance, a range of non-financial services should be provided⁶².

- *Insurance Education* for clients and non clients as well as for staff if the service is provided fully or by a MFI as an insurance agent.
- *Legal services* that for instance would assure women's property rights at the death of their husbands.
- *The State* has naturally a role to play in the social protection. The State should protect homes, businesses and other assets from theft and vandalism through systems that **enforce the law** (e.g. fight against corruption) and promote safe communities. It can also establish regulatory requirements for building codes preventive to fires and prepare effective emergency services in case of risk event. Governments should develop **regulatory frameworks** to encourage private sector provision of insurance products.

F. Conclusion

The first question that has been examined in this second chapter is where the demand for microinsurance arises from. We identified three origins: gaps in informal insurances, gaps in conventional insurance and gaps in microcredit and savings programs.

Formal microinsurance emerges out of the limitations of *informal insurance*: (1) the lack of access for women and the poorest since they are often socially excluded and cannot rely on

⁶² Cohen and Sebstad (2004)

family resources, (2) the high costs for the community, (3) the lack of efficiency, and (4) the impact of aggregate shocks affecting all the insured members of a group based mechanism simultaneously and making informal insurance ineffective.

Microinsurance fills also the gaps in *conventional insurance*: (1) a lack of supply towards the poor due to wrong assumptions, (2) non-adapted supply causing high costs for the customer (physical access, no clear information) and for the insurer (high information asymmetry).

Finally, providing microinsurance to the poor arises from weaknesses of *microcredit and savings* models, *on the demand side*: (1) access or outreach for the most vulnerable (the poorest): unstable incomes and the impact of hazards involves a risk of not being able to repay the credit. Some will exclude themselves and thus lose an opportunity to escape poverty. (2) Others will choose to take the indebtedness risk but the bottom-down poor do not have as much risk management opportunities. They will adopt low-risk profiles in order to manage their credit risk. As a result their income does not increase since the return of their activity is low. (3) Covariate risks result, for the poorest as well as the better-off poor, in indebtedness spiral since informal mechanisms are useless due to the aggregate nature of the shock, (4) credit and savings are far more costly for the clients for the protection of certain risks, and, *on the supply side*: (1) regular repayment schedules face difficulties with seasonal and single source incomes. The problem is particularly sharp for rural credit. (2) group-based credit schemes discourage voluntary savings because of the potential repayment problem of the members.

The second part examined which benefits and costs microinsurance – i.e. reduction of the impact of hazard – delivers for the poor and for the MFIs. The insured gains: protection of his financial (stable incomes), social (family) and human (e.g. education) capital, access to credit if previously unbankable, opportunity to choose high risk-return activities with covered risk, empowerment, reduced cost of production (agricultural and industrial), dignity, leveraged informal mechanisms. Microinsurance benefits to all the poor not only the insured. The costs for the insured are very few.

The benefits and costs for *MFIs* (full service model) need also to be weighted. Benefits are: mission achievement, scalability thanks to improved sustainability and outreach, broadened resource base and capacity building, and leveraged donor and state funds. Costs are heavy: management of a different risk structure, acquisition of competences and resources, basis risk, loss of focus, potential cannibalisation, and compliance with regulation. MFIs risk also the capital and confidence of the poor. These organisations are often still vulnerable and should not sacrifice their credit and savings activities since these participate to poverty alleviation.

Consequently, our initial assumption that microinsurance is fully provided by microfinance institutions has to be revised so that other *provision models* are to be investigated. Five models were indexed: the partnership model, the community-based model, the provider model, the social-protection model and the full-service model. It is the partnership model that seem to outset most of the costs associated to microinsurance. Some basic products are good candidates for the full-service model. However, no single model suits all needs. Every situation will have its own solution. Nevertheless, the partnership model shows the most benefits for covariant risks since the insurance risk is not supported by society or by organisations with limited management capacity, but by regulated private insurers.

In regard of the gaps that microinsurance could fill and regarding the benefits and costs for the poor and the MFIs, microinsurance, through the reduction of the impact of hazard, can be considered as very promising for large scale poverty reduction. Nevertheless, implementation of successful insurance schemes is the key. Therefore local research is needed to provide solutions to insurability.

We will analyse in next chapter how local research has brought a solution to climatic risk in rural areas.



Non-irrigated field of groundnut in the district of Mahabubnagar (India)

CHAPTER 3. | BASIX – Microinsurance in practice

A. Another look on poverty and inequality in India and Andhra Pradesh.

The first thing the election results drive home is the sheer disconnect between the Indian elite and the Indian people. Here was a leadership that thought the 'India Shining' campaign would bring it success. A part of the elite — even those with the Congress party — went further than that. They believed the claims of 'India Shining' itself were valid and true. The dispute was over the patent rights on the shine.
(Sainath P. "Mass media vs mass reality", the Hindu, 14 may 2004)

A few years ago India was still synonym of poverty and suffering. In recent years the idea rose about a booming high tech India that could be the next economical miracle. The feel good factor was overwhelming. For instance, the special New Year issue of the newsmagazine *Outlook* titled: "2003, The Feel-good Year". Next example can help you to better understand the spirit in which the Indian elite were living. The Hindustan Times of 19/12/2003 started their article 'The future has started' as follow: "*The country's economic scene appears excellent in all respects. GDP growth is expected to be at 7.4% in 2003-2004. From the point of the economy this year could be regarded as the most flourishing year that India has ever had after independence.* The author, K.K. Birla, continues all the way on about the IT destiny of India, about example of foreigners making investment in India, and about India being the challenger of China. Examples like these were flourishing every day in all Indian newspapers, among most of the bottom-up Indians and have even reached the international community. But is this change in people's view based on reality?

One can already tell that an objective and pure look out onto the streets of India, in 2003, can say much about the state of the country. The first thing you see, as a foreigner, is the enormous increase in conspicuous consumption by the rich and even the urban upper middle income groups, but also, side by side, how the lives of the poor have become even more vulnerable and precarious.

The truth, according to Jayati Ghosh⁶³, is that while a minority of the population (around 20 per cent) has indeed benefited greatly from the economic policies and processes of the last decade, for the majority of the rural population and a significant part of the urban population, things have got worse.

In a recent survey, Mr Waslekar⁶⁴ estimated that more than 80 % of India's 1.05bn people lived in the "bullock cart economy" - without even the means to afford a bicycle. Another 15 per cent lived in the "two-wheeler" economy. They could afford scooters and televisions. And only two per cent – about 25m people - inhabited the "business class" economy, those who can afford to fly and to dine in restaurants. They are 1.15 per cent who invests in stocks.

⁶³ in "Income inequality in India", People's Democracy, February 17, 2004

⁶⁴ cited by Edward Luce in "Rural India humbles Vajpayee", Financial Times, May 14, 2004, UK

Despite last year's "India Shining" campaign, indicators such as the Human Development Index of the UNDP point India at the bottom of the developing countries with the worst performance in child mortality, nutrition and public expenditure for health. It is better to be a poor person in Botswana or the Occupied Territories of the Palestine than one in India.

The basic results of a statistical work done by Abhijit Sen of Jawaharlal Nehru University, New Delhi (A. Sen, 2000), with calculations based on the NSS (National Sample Survey organisation) data, show the per capita consumption by different groups in rural and urban India since the late 1980s.

Those who were already the richest people in India - that is the top 20 per cent of the urban population – have shown the most remarkable improvement in consumption. Their per capita consumption has increased by around 40 per cent since 1989-90, and this increase is likely to have been even more in actuality since the NSS usually underestimates the consumption of the rich (A. Sen, 2000). This is the highest and most rapid increase in the consumption of the rich that has ever been recorded in India.

Abhijit Sen found out that the other group that seems to have done rather well is the top 20 per cent of the rural population - the rural rich - whose per capita consumption increased by more than 20 per cent since 1989-90. This was similar to the increase in consumption among the next 40 per cent of the urban population. By contrast, the bottom 40 per cent of the urban population relatively little increase in per capita consumption compared to these other groups, at only around 14 per cent since 1989-90.

But the most dramatic evidence is for the bottom 80 per cent of the rural population - well more than half of India's total population. For these people, who now number nearly 600 million, per capita consumption has actually declined since 1989-90 (A. Sen, 2000). In other words, even the official statistics of the government still show that more than half of India has lower consumption per person than more than 10 years ago, after a decade when national income were supposed to be growing at around 6 per cent! (J. Gosh, 2004) All through history, sharp increases in economic inequality of this order of magnitude, have been associated with massive social unrest, and even with cataclysmic changes in society. The movement has begun with the electoral 'quake' of the national election in May 2004.

There is almost no government in the country that has ill-treated its farmers and not paid the price, that has hurt agriculture and not been punished (Sainath, 2004). The Hindu (major Indian newspaper) reports that India has never seen so many farmers' suicides as in the past six to eight years. Past government as well as the media urged to blame it all on nature. It is true that droughts have badly hurt people in some parts of India. But that would be missing the wood for the trees (Sainath, 2004). Countless millions of Indians have seen their

livelihoods affected by non adapted policies that did not protect them against these risks, especially in agriculture. The challenge is more than ever restore the trust and accountability with the farmers.

The “social distance” between Government officials and drought-affected people further enhances the political invisibility of the latter’s predicament. Jean Drèze⁶⁵ argued further that the first step should be to ensure that the welfare of drought-affected people becomes a major political priority. That, in turn, is unlikely to happen unless drought-affected people are able to build countervailing power and alter the prevailing biases of public policy (J. Drèze, 2001).

What Jean Drèze, Abhijit Sen and a couple of other journalists predicted, media failed to see. For years now, the media have stopped talking to ordinary people (Sainath, 2004). How on earth can they tell their readers and viewers what is going on? Therefore they should go to the people. But even the smallest, most out-of-the-way town, is a long way from the villages where most of India lives (Mala Singh). According to Sainath, there were more than 400 journalists to cover Lakme India Fashion Week. Almost none to cover the agricultural crisis in any informed way. Despite all this, electorate of May 2004 has decided otherwise.

One of the first reactions on the electoral ‘surprise’ was the plunge of the Mumbai stock exchange that has finally catch a glimpse of the Indian reality. The truth is that as long as the most basic needs of the Indian people are not met, the elite will never find the ‘stability’ they so long for.

In this schizophrenic India, with its 26 states and huge disparities, we analysed the case of BASIX, an astonishing social MFI also providing microinsurance. The state in which our case study is located is Andhra Pradesh. It is India’s fifth largest state with a population of 76 million. Major parts of the State have been severely affected by droughts during the last years. One-third of its population lives in drought prone areas classified as semi-arid, with a normal annual rainfall level of less than 750mm (Department of disaster management, 2002). Less than 20 per cent of AP poor households with land and depending on agriculture have access to irrigation. Poor household’s access to commons such as pasture or water resources is often constrained by stronger claims of wealthier farmers⁶⁶. An AP livelihood survey revealed that 30 percent of respondents cited “loss of wages, income or work” as the major impact of a risk event. 45 percent cited that their response to the risk event was to borrow money, resulting in increase indebtedness. Andhra Pradesh is one of India’s leading reforming states but

⁶⁵ in “Starving the poor”, The Hindu, February 26, 2001 Jean Drèze, a Belgian citizen, is Professor at the Centre for Development Economics at the Delhi School of Economics. He has co-authored a number of books with Nobel Laureate Amartya Sen and is a member of the support group of the Right to Food campaign, an informal network of organisations and individuals committed to the realisation of the right to food in India.

⁶⁶ Baseline Survey carried out for AP-DPIP, cited by the World Bank.

according to Michael Carter, the World Bank's Country Director for India, a major effort is still needed in order to accelerate poverty reduction and reach the Millennium Development Goals.

For the moment let us hope that Manmohan Singh will honour what he has said a few days before taking over the function of Prime Minister of India:

"The first priority of the new government and of any government in India must be to tackle rural poverty and backward agriculture; this is the inescapable lesson of the election."

The case study of BASIX shows that Indians have learnt to tackle the poverty reduction efficiently by forcing changes without waiting for government support, even in rural areas.

B. The Indian Insurance Industry

The external context related to the insurance sector in India needs to be clarified before going further with microinsurance at BASIX. The following facts indicate how under-developed the Indian insurance business is due to state monopoly and lack of aggressive marketing of insurance policies. The per capita annual average premium in India is around US\$10 compared to US\$42 in Thailand and US\$1000 in South Korea. Even in China, the corresponding figure is US\$27.8 when both countries have the same premium figure as % of GDP, 2.3% (Swiss Re, 2000). During 2001-2002, the total insurance premium collected on life and non-life insurance services was Rs⁶⁷. 550,000 million, which is only 0.9% of GDP. The world average is 7.8%. Insurance premium as a percentage of savings is barely 5.95% compared to 52.5% in UK. So far, in India, insurance is seen mostly as a savings and tax minimization instrument rather than as a financial protection tool. Of the life premium collected, only 20% is paid towards risk coverage and the rest towards savings (IRDA⁶⁸). It is estimated that, in India, only 20 million out of 80 million insurable individuals purchased insurance. It implies that only 10% of the households (families) have access to insurance (BASIX).

With liberalisation, the sector has begun a new growth phase with stronger marketing of different policies by rival firms. Till recently, policies have been bought by customers rather than marketed by insurance companies (Rao, 2002). Indian insurance industry, as on 01.04.2000, comprised of only two players in the state sector: The Life Insurance Corporation of India (LIC) and the General Insurance Corporation of India (GIC). Both find their origin in the nationalisation in 1956 of hundreds private players. After 1.4.2000 the sector has been liberalized. Till May 2004, besides 5 publicly owned companies, 21 private companies were

⁶⁷ 1US\$ =50 Rs. (INR)

⁶⁸ Insurance Regulatory and Development Authority of India

active, out of which 9 are general insurers⁶⁹. However competition is intensifying. Essential for India is that the law prohibits composites (life and non-life). Foreign equity is also capped at 26% in life, general and reinsurance ventures. It puts a break into integration with the global markets. In addition, the minimum capital requirements were fixed by the same legislation at very high level (US\$20 million) and double as much for the reinsurers. This contributes to keeping important barriers to entry for smaller institutions who would like to provide insurance. India still counts only one reinsurance company, the public General Insurance Corporation of India (GIC). Further, the regulation prescribes obligatory minimum insurance business targets for achieving in rural and social sectors (IRDA). The targets are meant to encourage every insurer enter the rural insurance market. However, it is to be seen whether a proactive approach will prevail on the part of insurers to Indian rural market (BASIX).

The awareness on insurance in rural India is low. According to BASIX, there is a pressing need for increased awareness, suitable rural insurance products, effective distribution systems and importantly, orientation of insurance products towards financial risk protection. Moreover, with low sum assured and small premiums, the distribution cost of rural insurance products is high compared to that of urban products. However, past experience has demonstrated that innovation can overcome impossible hurdles. Liberalisation will contribute to innovation by forcing players to offer more competitive products along with better customer services, at least theoretically. First let us look at the existing insurance schemes. Since we are concerned by covariant risk and especially risks that affect the production in rural areas, we will only consider general insurances. The dominant scheme among these is the multi-risk crop insurance provided by the public sector.

Public crop insurance scheme

The insurance we are concerned with is the crop insurance schemes. The crop insurance was initiated by government of India mainly after independence in 1947. The Comprehensive Crop Insurance Scheme (CCIS) was introduced in 1973 till 1999. Farmers received nearly 6 times the premium as claims, but the coverage could not go beyond 5% of the total farming community and had many shortcomings. The National Agricultural Insurance Scheme (NAIS) is an improved version and replaced CCIS in 1999-2000 (Rao, 2002). The scheme is based on a ‘homogenous area’ approach and is available to all states and covers all farmers, borrowers on compulsory basis and non-borrowers on voluntary basis. It is a multi-peril or all-risk crop insurance covering a very broad spectrum of production risks. All the farmers will get the

⁶⁹ 2000-2001:Royal Sundaram Alliance Insurance Company, Reliance General Insurance Company, TATA AIG General Insurance Company, Bajaj Allianz General Insurance Company, ICICI Lombard General Insurance Company, AMP Sanmar Assurance Company.

same indemnity for the same block area. A value of 150% of average yield can be insured. Premium rates are low and range from 1.5% to 3.5% and small farmers are eligible for premium subsidy (50%). The number of implementing states has risen steadily to 21 (Rao, 2002), including Andhra Pradesh. Government and states account for 87% of the support to the scheme (12% farmers; 1% GIC). Even if the NAIS may be a good ‘attempt’ and provide some extent of relief, several major shortcomings emerge, particularly in the implementation and in the underlying system of crop insurance. Two characteristics are particularly stressful for crop insurance schemes such as the actual NAIS: the correlation of crop risks and the asymmetric information problems causing huge abuses. The resulting problems of adverse selection and moral hazard typical for conventional insurances (detailed in 2.1.2) become exacerbated. For instance, farmers started growing crops in high-risk regions increasing their future exposure to losses but also their dependency on the public insurance. It is evident that a scheme covering all India can not provide sufficient and efficient monitoring of the insured farmers behaviours. And when subsidies increase, those high risk farmers who obtained the most benefit in the past obtain even more benefits (Skees, 2003). Further, NAIS being a multiple-peril crop-yield insurance it is not always easy to tell whether the loss occurred due to some covered natural loss event or due to poor management. Moreover, the severity if the loss is not easy to measure either since one should rely on the yield information provided by each farmer. The probability that the insurance does not pay while the farmer incurs losses or does pay while farmer does not suffer from a loss is very high (‘basis risk’). It makes the scheme very inefficient. Typical also to crop insurances is that they lack of precise and objective criteria of what triggers the insurance payment. This leads to high potential for political interference, corruption and bad allocation of payments (S. Ramesh).

Further, crop insurance covers only one source of income in the rural areas, the crop production. Livestock, off-farm labour etc are still subject to high risks related to climate for instance.

Finally, when all costs are considered, performance of publicly supported all-risk crop insurance has been poor. For private companies the administrative costs and the indemnities paid out should not exceed the collected premiums. Hazel (1992) quantifies the condition for sustainable insurance as follows:

$$\frac{A + I}{P} \leq 1$$

Where

A = average administrative costs
I = average indemnities paid
P = average premiums paid

In 1992, Hazel found that in every case the value exceeded 2 (Table). This means that government support is at least 50%. In India, until 1999, for every dollar of premium collected, government had to disburse 5.82 dollars as support. It seems to me a very high price to pay to obtain ‘sound’ crop insurance.

Country	Period	I/P	A/P	(A+I)/P
Brazil	75-81	4.29	0.28	4.57
Costa Rica	70-89	2.26	0.54	2.80
India (CCIS)	85-99	4.75	1.06	5.82
Japan	85-89	0.99	3.57	4.56
Mexico	80-89	3.18	0.47	3.65
Philippines	81-89	3.94	1.80	5.74
USA	80-89	1.87	0.55	2.42
	99			3.67

Source: Hazell (1992), Skees (2003) and Rao (2002)

In short, the public crop insurance schemes demonstrate problems of financial sustainability and over subsidization. More important is that it involves bad distribution of benefits to vulnerable groups most in need of assistance. They undermine traditional risk management and coping systems by creating dependencies instead of opportunities. Production decisions are distorted and the incentives for the private sector to provide market-based approaches reduced (World Bank⁷⁰). As all-risk crop insurances, such as the actual NAIS, appear to be fiscally burdensome and largely inefficient, alternative insurances need to be provided to protect farmers or non-farmers and their households against impacts of hazards

C. The Basics of BASIX: A New Generation Livelihood Promotion Institution

BASIX has been founded in 1996 by Mr Vijay Mahajan, co-founder and former executive manager of PRADAN, Ms Bharti Gupta Ramola, Executive Director of PricewaterhouseCoopers and Mr Deep Joshi⁷¹, Program Director of PRADAN⁷². The mission of BASIX has been established as “to promote a large number of sustainable livelihoods (quantified at 1 million by 2010), including for the rural poor and women, through the provision of financial services and technical assistance in an integrated manner.” Therefore BASIX strives to access to mainstream capital markets and human resources on a continuous basis. For this, it seeks achieve a competitive rate of return for its investors.

To pursue this complex mission BASIX has had to innovate constantly, including in their organisation structure. Different companies have been created to fulfil a diverse set of tasks. The term ‘BASIX’ stands as the brand name of the group. The parent company is Bhartiya

⁷⁰ Agriculture Investment Sourcebook

⁷¹ Founders are graduated from IIM Ahmedabad and Mr Joshi from MIT (USA).

⁷² PRADAN is an NGO engaged in promotion of rural livelihoods.

Samruddhi Investments and Consulting Services Ltd or BASICS Ltd for short. BASICS has 4 subsidiaries.

Bhartiya Samruddhi Finance Ltd, registered with the Reserve Bank of India as a Non Banking Finance Company (NBFC) and owned at 47% by BASICS and at 53% by major financial institutions⁷³, is engaged in microcredit and life-insurance and provides technical assistance services to some of its borrowers. It is the main operating entity. As on March 31, 2003 Samruddhi was present in 3600 villages in 18 districts spread over five states of Andhra Pradesh, Karnataka, Orissa, Maharashtra and Jharkhand. Since 1996, it had cumulatively disbursed over 90000 loans worth Rs 1.135 billion (US\$22.7 million). On March 31, 2003 the outstanding were Rs 310 million (US\$6.2 million) with 40400 active loans. The on-time repayment rate is 93.3% and eventual repayment rate (i.e. with some delay) is over 97%.

A second subsidiary is an NGO, **Indian Grameen Services (IGS)**, registered as a not-for-profit company. It is involved in carrying out research and development for livelihood promotion. It builds a knowledge base and disseminates it to support capacity building of various organisations. It also provides technical assistance and support services to Samruddhi borrowers (a third of them) and other rural producers and institutions. It carries out human resources, institutional and financial product development for BASIX and for institutions (MFIs, producers, cooperatives etc). Action research is led along various sub-sectors (dairy, water, groundnut etc).

Sarvodaya Nano Finance Ltd was initially set up to serve lower income group borrowers who are now served by Samruddhi and KBSLAB. In 2001 BASIX disposed off it to a group of community based mutual benefit trusts whose members comprise 5,000 women's Self Help Groups (SHG) of poor women in Tamil Nadu. However, the agreement says that management is continued by BASICS. Sarvodaya provides loans to 3,000 SHGs including 42,000 women (cumulative disbursements of US\$ 3.7 millions).

Finally, BASICS owns 100% of **Krishna Bhima Samruddhi Local Area Bank (KBS LAB)**. It is the first microfinance bank in India! It started operations in March 2001 after having received the license of the Reserve Bank of India to open a Local Area Bank. The license enabled KBS to take deposits and offer savings products. KBS is allowed to operate in three districts: Mahabubnagar in Andhra Pradesh, Raichur and Gulbarga in Karnataka. As of March 2003, KBS counted 2900 borrowers (outstanding of Rs 39.7 million) and 6355 depositors (Rs 24.4 million). The mission of BASIX can be transposed to KBS with the obligation to be a sustainable local community based institution. Since the start in 2001 KBS has increased its activity very significantly. Deposits have increased with 519% to US\$0.5 million during

⁷³ IFC, USA; Shorebank, USA; Hivos-Triodos Fund, Netherlands; ICICI and HDFC, India

2002. It represents 6,400 deposits. KBS provides credit to over 5,000 persons, a majority of which is in the category of small and marginal farmers (27%), rural artisans, micro entrepreneurs (40%) and SHGs (21%). 61% of KBS loans are disbursed for agricultural activities. It makes it very vulnerable to variation of crop yields and related risk factors.

KBS is restricted by law to three districts. If it wants to promote a “large number” of livelihoods, the only way to do it is by deepening the outreach towards the people adverse to loans due to high vulnerability. But it has simultaneously to increase the quality of its portfolio. The on-time repayment rate of KBS is only 81.6% compared to 93.3% for Samruddhi. Eventually – i.e. after 180 days – it becomes 90% (BASIX, 2003). This portfolio quality problem is attributed to prolonged *drought* affecting repayment of farm loans and to the rapid expansion and development of human resources in new areas resulting in reduced efforts to recover loans. Larger outreach and better portfolio quality could be solved through an innovation such as microinsurance. It is thus in coherence with its mission that KBS has started a microinsurance project in the district Mahabubnagar in order to (1) continue to serve the farmers despite of droughts risk, (2) to reach a larger number of livelihoods and (3) enhance sustainability.

BASIX Approach to financial services

The paper aims to examine the rainfall insurance project launched by KBS and not the operations, sustainability or performance of the companies KBS and BASICS⁷⁴. However, certain characteristics and issues have to be highlighted to give a sense to the next steps of BASIX.

BASIX strongly believes they should work with the poor for self-employment but also with the not-so-poor, to generate wage employment (commercial farms, non-farm enterprises) for the poor since not all the poor want to be self-employed. Thus, different methods are required to reach different segments of the market. BASIX established three types of lending method: Direct lending to the producer, direct lending with a collaborator (cooperatives, NGOs etc) and indirect lending through an intermediary (SHG, federation of SHG, seed production organisers. 10% in 2003).

Furthermore, the microinsurance project relies inevitably on the *resources* and the strategy developed by BASIX for the credit and savings distribution. As of June 2003, the group (without Sarvodaya) is present in over 3600 villages with a strong network of over 175 Customer Service Agents (CSA, independent loan officer) each having access to 15 villages on a weekly basis. KBS counts 15 CSAs; 180 staff members (KBS: 25) among whom 80

⁷⁴ For further information on BASIX, its lending methodologies and performances refer to www.basixindia.com, the annual reports of BASICS, the CRISIL's global rating report, and the report of KBS directors.

professionally qualified employees to manage the business; fully equipped unit offices functioning as profit centres; solid management information systems and a proven performance in rural credit with over 95% performing portfolio and a return on assets of +1% (BASIX, 2003).

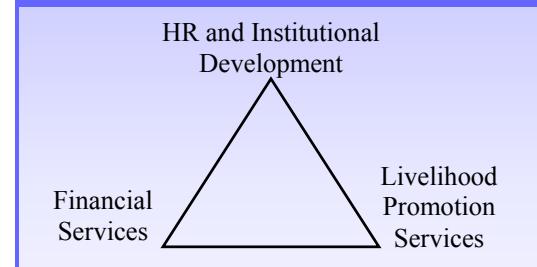
"Credit is a necessary, but not a sufficient condition for promoting livelihoods" (BASIX)

The strategy of BASIX has been recently reviewed in order to achieve more efficiently their mission of poverty reduction (or livelihood promotion). The strategic focus has been broadened from financial services (FS) to a more comprehensive approach, including more focus on livelihood promotion services (LPS) and human resource and institutional development (HR/ID). BASIX expertise and efficiency in providing financial services was remarkable but not enough to pursue rapid scaling up. Stable growth in this work has certainly to be maintained. This idea has been conceptualized in a livelihood triad where FS, LPS and HR/ID forms the three corners and reinforce each other.

Along the strategic framework, strategic initiatives are undertaken by BASIX. These can be divided into:

- Livelihood enhancement, in the selected sub-sectors/vectors (dairy, groundnut, vegetables/ water, rural electric power etc) and states. The objective is to create a forum or platform (Livelihood Enhancement Action Platform, LEAP) to facilitate an effective interaction between various players involved directly or indirectly in livelihood promotion. Partnerships are created with government as well as with private sector.
- Information technology solutions for livelihoods
- Institutional development for other MFIs and livelihood promotion institutions

Figure 11: Livelihood Triad of BASIX



It is starting with these resources and in this strategic context where the achievement of the mission of poverty reduction receives clearly a higher priority than unique finance servicing, that the rainfall insurance project has been launched by KBS and ICICI Lombard Insurance.

D. Microinsurance by BASIX

1. Overview

BASIX's mission is to promote rural livelihoods by providing financial services. This includes also insurance. BASIX shares the view developed in this paper that rural people need all the three financial services, though at varying scale with time. They are convinced as well

that savings and insurance services assume greater importance, over credit, for the asset-less poor and wage labourers in building their capital and risk protection. The vision of BASIX is thus to provide access to risk management services for ALL poor households (especially those served by BASIX) on a financially sustainable basis. This vision relies on the existing resources developed in the context of microcredit and savings.

The insurance experience started seriously in October 2002 when direct borrowers and their livestock began to be insured. The aim is to cover the lives of all its customers and 25% of livestock financed in 2003-04. Insurance is also planned to be sold to non-borrowers in 2004-05. To develop suitable and sustainable insurance products BASIX works in collaboration with conventional insurers with whom they signed a Memorandum of understanding (MoU).

Credit plus: AVIVA *Life insurance* has developed jointly with BASIX a group insurance policy for covering direct borrowers during the loan period. The loan amount is covered up to 1.5 times the credit extended. The claim amount in excess of loan outstanding goes to the family of the deceased. “Credit plus goes beyond covering loan” said D. Sattaiah, Associate Vice President of BASIX. Some important features are:

- All direct borrowers between 18 and 55 years are covered
- It covers risk of death against natural, medical or accidental causes
- Insurance cover is for the loan period and ends with the loan

Table 6: Life and Livestock insurance – BASIX (Rs. in millions)

	Achievement during Oct 2002 to March 31, 03	Projected for FY 2003-04
No. Of Units (Branches) where insurance is done	7	22
No Of Lives + livestock Covered	3189 + 208 (40,000 to Dec 2003)	61,000 + 6,900
Sum Assured + Sum Insured Rs.	50	1009
Annual Equivalent Premium Rs.	0.5	10
No of Claims Reported (Life + Livestock)	6	-
No of Claims Settled	5	-
No of Claims in Process	1	-

Source: BASIX

Livestock Insurance: Royal Sundaram (RSAGICL) developed jointly with BASIX to cover the livestock financed by Basix. The coverage is extended to milk animals, goats and sheep within specified age limits. It is provided on certification by a CSA, a representative of Basix. The animal is insured for its market value against death due to natural, accidental causes or diseases acquired after the commencement of coverage, which is available for 12, 18 and 24 months periods. Here, the premium is paid along with the loan repayment, preferably frequently (monthly, quarterly). If the premium was paid only once a year “it happens that

they don't keep in mind that they are insured and forget that they have to pay" said a BASIX employee. This leads to misunderstanding on the loan activity.

These two schemes represent solutions to independent risks regularly affecting the poor and having important consequences on their livelihoods. Nevertheless, covariant risks would remain unchanged unless other insurance products are developed. This is illustrated by the district of Mahabubnagar in Andhra Pradesh where the main problem encountered by the population for income generation and sustaining a decent livelihood is drought. In June 2003 BASIX initiated therefore an innovative pilot project of weather insurance.

2. Pilot project: Index based weather insurance

The pilot project of selling weather insurance coverage has been launched in July 2003 by Krishna Bhima Samruddhi Local Area Bank (KBS LAB), wholly owned subsidiary of Basics. The rainfall insurance policy has been conceptualized and modelled by an Indian insurer - ICICI Lombard General Insurance Company – with support of the World Bank and IFC. ICICI Lombard also sought out reinsurance. BASIX has started the pilot project by selling 230 individual policies to groundnut and castor farmers in Mahabubnagar District at the eastern end of the state of Andhra Pradesh, bordering Karnataka. It has also proposed selling policies to soy farmers in Madhya Pradesh. The next pages describe and examine the contract design of the weather microinsurance and finally draw the key success factors and challenges.

a. Contract Design

Motivation – Mahabubnagar has experienced three consecutive droughts during the last years. These disasters have major impacts on the livelihoods of the farmers but also of the non-farm employees. As a result, poverty increases in distribution and duration. BASIX is willing to contribute to a solution by building a policy able to cover covariant risk with the less possible moral hazard and adverse selection while maintaining costs low. BASIX also wanted a system where the community has a stake in claim settlement. BASIX has always been at the edge of innovation and has very good knowledge of new opportunities such as microinsurance. In addition, "local area banks are limited to operations in three adjacent districts and therefore face limited natural portfolio diversification" said KBS director NV Ramana. "This is why KBS Bank is keen to offer rainfall insurance to its borrowers as it would mitigate the risk inherent in lending in drought prone areas such as Mahabubnagar, Raichur and Gulbarga." Indeed, 25% of the portfolio of KBS is for crop loan on a 6 to 10 month basis.

Clients – The project started with about 50 customers covering 128 farmers organized into two Bore well Users Associations (BUA), Pamireddypally – Ausloinipally, where a group of people own a community bore well for the irrigation. Hence, their cultivation extent is known to the group members. There were 76 farmers for castor and 52 farmers for groundnut. Castor

and groundnut being among the most cultivated crops in Andhra Pradesh since they do not require much water supply. The project now counts over 230 individual policies that were sold to small, medium and large groundnut and castor farmers. Small farmers are defined as households farming less than 2 acres of land; medium-sized farms cover between 2 and 5 acres; and large farmers have more than 5 acres. “We decided to offer the rainfall insurance to those who are at present not covered by the government’s crop insurance scheme, such as



Insured farmers of Mahabubnagar

farmer members of community borewell users associations (BUA) formed by Aadarsa Welfare Society, an NGO, and farmer members of women’s self-help groups (SHGs) organised by the Government’s Velugu program,” KBS Bank General Manager S. Ramesh said. This selection has been operated in order to allow assessment of the scheme efficiency independently to other programs. Moreover, at present only active borrowers of BASIX are

considered for the project. S. Ramesh adds “After this trial, KBS Bank would like to distribute rainfall insurance to a much larger number of farmers and provide coverage of crops financed to reduce the risk to the farmers as well as KBS Bank on account of failure in rainfall.” If the project confirms its promise the rainfall insurance will be expanded to non-borrowers as well as to non-farmers. For next monsoon season, Sattaiah⁷⁵ said, BASIX aim to cover 1500 policies.

Principle – If the actual rainfall does not reach a threshold representing the expected rainfall determined for a specific period, region and crop, then the farmer gets compensation proportionally to his coverage and to the extent of the drought.

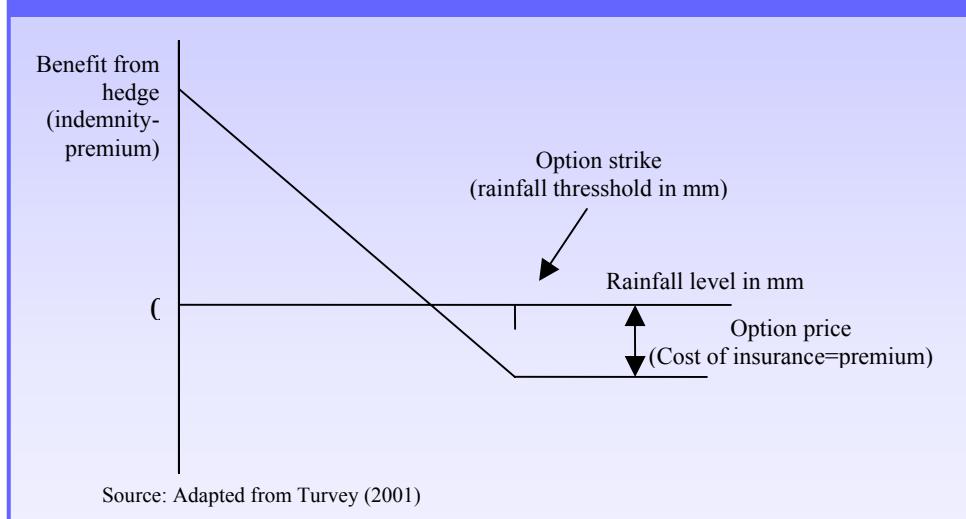
Structure of the policy – The policy has to comply with numerous constraints for which a lot of actuarial data (30 years) is needed as well as adequate resources. Therefore, BASIX is supported by the World Bank for developing adequate product requirements.

The rainfall insurance is based on the index method. The claim settlement or loss adjustment of the insured is based on a weather index. This weather index can be based on various weather parameters (rainfall, temperature, humidity etc.) in specific time periods. KBS has

⁷⁵ In a questionnaire addressed to the author, April 2004.

chosen for a single parameter, rainfall. KBS Bank and ICICI Lombard opted for a weighted rainfall index, which means that more critical periods for plant growth are weighted more heavily than others. The key issue was collecting the historical data about rainfall and crop yield to establish threshold levels and expected rainfall. The structure of the index has been developed, on recommendation of a World Bank study, in analogy to a European put option where the option price is the cost of the coverage and the strike is the rainfall threshold below which an indemnity is triggered.

Figure 12: Payoff structure for European put option on rainfall



The underlying principle is that an agricultural producer, as small as he is, can hedge his production risk by entering into a contract under which payments would be made if rainfall levels fall below the selected strike. However, before, the existence of a sufficient degree of correlation between rainfall and production (yield) has to be established. This correlation has been established for Andhra Pradesh and Mahabubnagar by means of the collected data. In order to structure the policy, the issues to evaluate are therefore how to determine the strike and at what level to set it (Ulrich Hess, 2003).

The procedure followed in this case of groundnut and castor production was:

1. Collection and organisation of historical data about rainfall and crop yield
2. Selection of the most adequate rainfall period by estimating correlations between yields and different rainfall periods
3. Construction of specific rainfall indexes assigning weights to different rainfall periods in order to maximise the correlation between rainfall and yields
4. Analysis and evaluation of different schemes for the premium and payouts.

After collection and validation of the data (1), the **rainfall time period** (2) had to be defined. It is the period that is considered for coverage purposes. The choice is mainly based on climate and plant physiology. These crop-related scientific inputs were provided partially by

Mahabubnagar local bodies. The period selected by BASIX spread from May to October because it corresponds with the start of the plantation and with the start of the harvest. Marketing issues also have their importance for the construction. It appeared that it is clearly not advisable to include rainfall periods that precede contract signing time. One has to avoid the possibility of producers making an informed decision on whether to enter the contract or not.

(3) The next step is structuring the rainfall index. Despite the high level of rainfall-yield correlations measured in Mahabubnagar, developers (BASIX, World Bank and ICICI) found out that it is an advantage to incorporate agronomic information in the contract structure to enhance rainfall-yield relationship. In fact, different stages of growth in the crop production require different amount of precipitation. The first rain of the year in Mahabubnagar comes traditionally in May. As soon as the rain has started farmers begin to plant. It is then absolutely crucial that a second rainfall occurs one week later. This period and the two following months have much more importance for the growth of the crops. From August to October the need for water is much lower. Therefore, weights are less important in these months. Further, too much rain may be of no use for production. Hence, BASIX developed a weighting system that allows differentiating the importance of rainfall in different growth periods. The cropping periods are divided in 10 days so that there are 3 period per month. The index is also capped, which means that the maximum rainfall counted per sub-period is limited to 200mm, so as to take into account the fact that excess rain may be wasted without contributing to plant growth. The weights are assigned through a mathematical programming procedure that maximises correlation between the rainfall index and yields. This procedure is also the objective of data processing (D Sattaiah). An ad hoc procedure slightly modifies the vector of weight to be more consistent with logic and agronomic intuition. This last step may somewhat reduce the rainfall-yield correlation, however it permits to establish homogeneous rainfall periods that make the contract more understandable and hence more marketable.

Table 7: Structure of the rainfall index

Month	May			June			July			August			September			October		
10-day period	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Weight*	H	H	H	H	H	H	M	M	M	M	L	L	L	L	L	L	L	L

*H-high weight; M-medium; L-low, estimation.

Source: KBS

The actual rainfall is calculated by summing the values obtained by multiplying the weights assigned to each period with the collected rainfall corresponding to the same period. It will be compared with the threshold or strike in order to know whether the insured should be granted an indemnity or not.

$$\sum_{i=1}^{18} w_i \times r_i$$

w = weight

r = rainfall

i = 3 periods over 6 months

The customers will receive compensation if the level of index falls below the determined threshold or strike. On basis of historical data and of the developed policy structure the threshold has been fixed at 90% of the Normal Rainfall Index, i.e. 90% of 439mm for castor and 653mm for Groundnut. The difference between castor and groundnut is based on agronomic research. The index provides for rainfall deficiency from 10% to 100%. The higher the thresholds set for the contract the better the coverage provided, but a higher threshold results in a higher cost of the insurance coverage (Hess, 2003).

(4) The fourth step in the procedure was the analysis and evaluation of different schemes for the premium and payouts. It has been established that premium rates for groundnut crops start at Rs. 400 for the small farmers, with a maximum claim of Rs 14,000. Medium farmers pay Rs 600, with a maximum claim of 20,000, and large farmers pay Rs 900 for a maximum claim of Rs 30,000. KBS Bank decided at this pilot stage to limit the liability per farmer rather than imposing per acre limits to manage overall liability. For the reason that it makes the scheme more easy to understand and thus ease the acceptance. Historical maximum payouts are around 3025 and would have occurred in 2002 and 1997 (Hess, 2003). Thus, the premium rate is calculated to be around 15%. This rate may seem a little expensive. Nevertheless, the farmers seem to value the quick payoff of the rainfall insurance (S Ramesh), which distinguishes it from the other existing crop insurance policy in India, wherein claim processes are much longer and uncertain.

The amount paid by the insurer (payout or claim) to the client is then equal to the percentage of rainfall shortage multiplied by the level of coverage selected. There is a specific rate for each deficit between 10% to 25%, 25% to 55% and 55% to 100%. The product is being improved by making the payout structure for ‘mm of rainfall’ so that the farmers can relatively understand better when compared to the percentiles (D Sattaiah⁷⁶). The claims are calculated incrementally. Every ‘tick’ or increment of a certain % under the strike results in a fixed payment. For instance, if the actual rainfall happens to be 500mm (23% deficit) for a large farmer who purchased insurance for groundnut (strike = 90% × 653 = 588mm) then the average indemnity per % would be INR 300 (=30,000/100). 13% (=23% - 10%) of deficit is covered. The formula for the total average indemnity is then:

Table 8: Segmentation of weather insurance

Groundnut			
	Criteria	Premium	Max. payout
Small farmers	< 2 acres	400	14,000
Medium farmers	2-5 acres	600	20,000
Large farmers	> 5 acres	900	30,000

Source: KBS

Segmentation of weather insurance Castor

	Criteria	Premium	Max. payout
Small farmers	< 2.5 acres	255	8,000
Large farmers	> 2.5 acres	395	18,000

Source: KBS

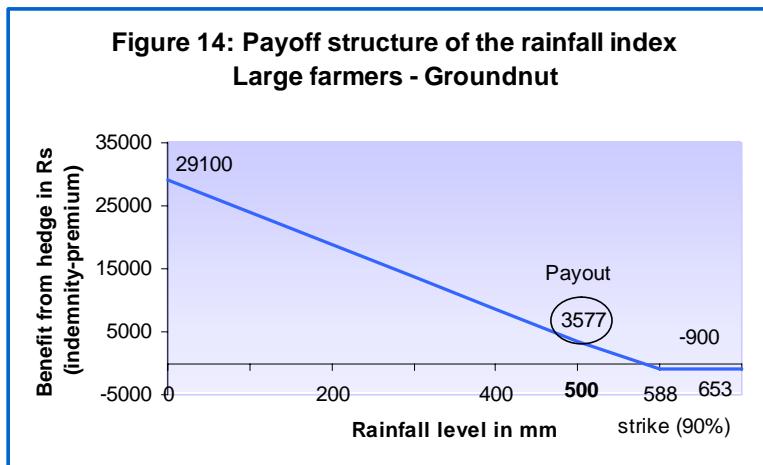
⁷⁶ In an interview at BASIX Headquarters, Hyderabad, December 2003

The total indemnity for 500 mm rainfall is calculated as:

$$\frac{\max. \text{ payout} \times (\text{Strike} - \text{actual rainfall})}{\text{Strike}}$$

$$INR 30000 \times (588 - 500) / 588 = INR 4477$$

And the total cash in for the insured is: $4477 - 900 = INR 3577$



Measure: The rainfall is collected by means of local weather stations spread over the covered region. Measures are carried out for every sub-period by independent people. Last, the reference weather station was District Indian Meteorological Department (IMD) centre. However, Mr. Sattaiah, associate vice president, indicates “we are designing the product with reference to nearest acceptable local rainfall measuring station”.

Performance – Performance of the index can be assessed against past events and against alternative schemes. Simulations have been carried out showing how incomes would have performed during the past years in case the rainfall insurance would have been already effective (D Sattaiah). Specific year's likely payouts are thus shown for the rainfall experienced. Simulations done by ICICI and BASIX are well concluding.

Compared to the crop insurance schemes such as NAIS the differences are laudatory in favour of the rainfall index. The following table resume the differences documented extensively earlier in this section.

Table 9: GIC crop insurance (NAIS) vs Rainfall insurance	
Multiple peril coverage: floods, drought, temperature, fire	Coverage for shortfall of rainfall
Covers only one source of income: agriculture production	Covers also livestock, off-farm labour, loans given by individuals or organisations etc.
Drought (etc) declaration is politically motivated – not transparent	Calculation of rainfall index is transparent and fully objective
Claim pay-outs after a lag of 2–3 years	Immediate claim settlements initiated by insurer
Claim pay-outs based on minimum prices	Payouts based on a fair estimated market price
Administrative waste and high operating expenses – money of the citizens is ‘lost’ in administration and does not reach the people in need	Cost efficiency – more money arrive to the people in need

Market awareness - A brief observation time and a few informal interviews led in the village of Kalupalli (sample of 36 borrowers with rainfall insurance) has led me to observe that the farmers who bought the policies, though in groups, are very aware of the rainfall-based index nature of the contracts and the associated basis risk. This catches up with the World Bank's opinion on clients' awareness. However, the same observation reveals that a large part of the farmers are aware of the benefits of policy thanks to or due to the trust they place in group leaders. In reality the awareness is thus situated on a community level.

The project community also understand the two-step payout structure, and that the liability limit is a theoretical number, and that historical maximum payouts are around Rs3025 and would have occurred in 2002 and 1997 (BASIX). Farmers also said they understand and appreciate the structure of the insurance policy as it directly reflects their experience that the distribution of rain throughout the season matters a lot for the yield.

System development – KBS has already developed and installed information system in integration with credit information system for effective data tracking and monitoring. As we have seen, information systems are a vital requirement for insurance providing.

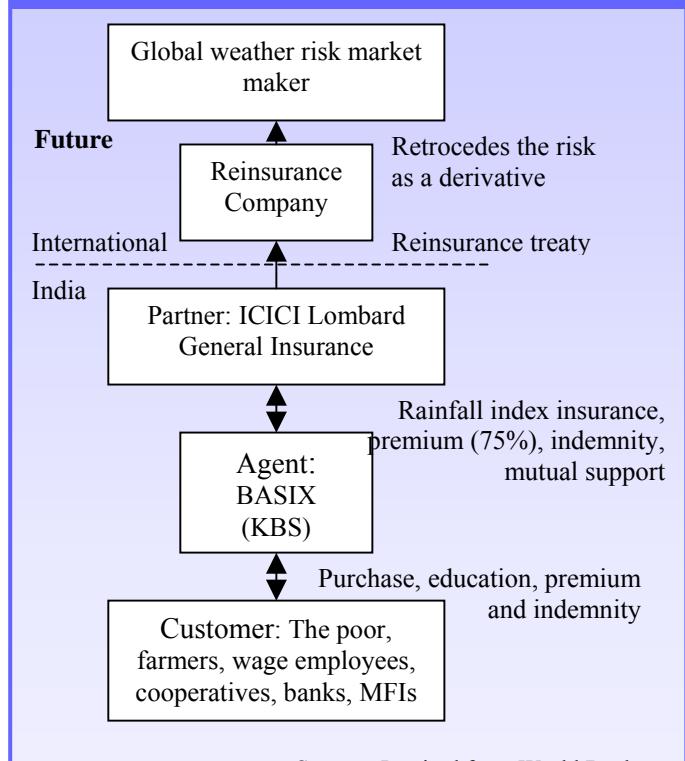
Staff training – The insurance is marketed by the independent Customer Service Agents in place for the credit distribution. The field executives supervise and guide the activities of CSAs while supporting the unit manager. All these people are evolved in a certain way with the new insurance product. A clear training plan has been elaborated and executed for them. The staff training on insurance has already been completed with support of the insurers (BASIX, 2003).

ICICI Lombard - BASIX: Partner - Agent Model

Our analysis of the different provision models (point 2.5) pointed out the many benefits of the partnership model. These are also applicable to the case of BASIX.

In this model, BASIX “shares its expertise of the market and of product development for the poor” said D. Sattaiah, Associate Vice President. And the insurance company designs the product under guidance of BASIX’

Figure 14: MicroInsurance Provision Model of BASIX



Source : Inspired from World Bank

knowledge. In practice, BASIX can tell the insurer if a certain feature is not feasible but it is the insurance company who develops the criteria for providing insurance because they take the insurance risk. Once the product is developed it is up to BASIX to make the distribution (sell) and maintain customer relationship (market).

The cash flows between two parts have been negotiated too. BASIX first pays the premium to the insurer. The premium is then recovered by them from the client. In this way they have a stronger incentive to follow the relationship. 15% of the premium is kept by BASIX, to, among other things, cover their costs.

Reinsurance – One of the top five global reinsurers has agreed to reinsurance this rainfall insurance portfolio. The idea is to sell the policies to large number of people in different rainfall zones to make the overall approach global.

The traditional mechanism is to share covariant risk with another insurance company by what is called reinsurance. It can take many forms. The simplest form is another insurance policy on the insurance losses of a local insurance provider. An example is a stop-loss policy where the reinsurer pays for all losses beyond a certain threshold. As he is a global player, the local correlated risk becomes an independent risk. However, even if efficient, there are significant limitations such as difficult price discovery (prices are not transparent because of the few players creating high market powers), transaction costs are high, and prices may be too high for a lot of players due to information asymmetry (Skees and Barnet, 1999).

Therefore, if authorized by national regulation direct access to global markets would avoid waste due to costly intermediation. Insurance securitization has been developed in recent years to offset limitations of reinsurance (Cole and Chiarenza, 1999; Doherty, 1997⁷⁷). This involves the creation of marketable security through a standardized risk. The rainfall index insurance allows such packaging in a marketable security such as derivatives because it is standardized, verifiable and well understood. But derivative providers are often not licensed to undertake reinsurance in developing countries and must pass through reinsurance companies.

Many international investors can participate in the risk sharing of the end risk affecting the poor farmer. Through reinsurance and instruments such as derivatives, index insurance can shift correlated risk out of developing countries into the global market! (Skees, 2003) International finance and globalisation of the markets may then be helpful for poverty alleviation.

b. The key factors of success

⁷⁷ Quoted by Jerry R. Skees (2003)

The key innovation of this rainfall insurance contract is that insurance is linked to the underlying systemic risk (i.e. low rainfall), defined as an index that measures rainfall and recorded at a regional level (local weather stations), rather than to the extent of the resulting loss (reduction in crop yields) (Hess, 2003).

"Weather insurance does not suffer from the usual moral hazard and adverse selection and high administration cost problems of traditional crop insurance, and it is therefore better suited to small farmers in rainfall-dependent countries such as India" (Panos Varangis⁷⁸).

This rainfall Index contract offers a number of advantages over other more traditional crop insurance (Skees, 2003). (1) There is *no moral hazard* because the indemnity does not depend on the realized yield but on the rainfall that has a demonstrated correlation with the yield. (2) *Adverse selection is avoided.* Index insurance is based on widely available information so that there are no informational asymmetries to be exploited by the insured. Hence, it can be supplied by private sector with little or no government subsidies. (3) *Administration costs are low.* The rainfall index insurance product does not require underwriting and inspections of individual farms. Farm yields do not need to be measured. There is no need for compliance officers. (4) Thanks to a standardized and transparent structure policies can be sold in various denominations as a simple certificate with a uniform structure across the underlying indexes. The contract is *easy to understand* and more marketable. (5) The Index insurance policy can easily be negotiated and traded in secondary markets. Such markets would create liquidity and allow policies to flow where they are most highly valued. Skees suggests that individuals could buy or sell policies as the realization of the underlying index begins to unfold. (6) The policy offered by BASIX is affordable for poor and better-off people alike, and available to a wide variety of parties, including farmers, agricultural lenders, MFIs, traders, suppliers, shopkeepers, consumers and, very important, to 'wage' employees in agri-businesses as well as in other sectors. (7) The index insurance can have a reinsurance function. It can be used as a mechanism to reinsure insurance company portfolios of farm-level insurance policies exposed to non-diversifiable correlated yield loss risk. Insurers can transfer this risk while retaining the residual independent risk. (8) The quality of historical weather data in developing countries is generally much better than the quality of yield data. And it may be less costly to set up a system to measure weather events for specific locations than to develop a reliable yield estimation procedure for small geographical areas (Skees, 2003). (9) Chapter 1.4 of Section II indicated that independent risk should be a precondition for insurance. However, for index insurance to work the best for individuals the precondition is correlated risk. As a result when there is a drought affecting a whole region the rainfall insurance will be

⁷⁸ Lead Economist for the World Bank's Agricultural and Rural Development Department (ARD).

able (if well designed) to protect the insured, including the most vulnerable, against the risk. This illustrates how innovation has found an answer to manage a traditionally uninsurable risk.

"Our microinsurance project adds sustainability to BASIX in terms of mission and finance." D. Sattaiah, Associate Vice President, BASIX.

(10) Rural banks and MFIs also benefit from improved collateral, secured lending and reduced default rates, and increased lending amounts and savings in rural areas. Finally the public sector can benefit from reduced need to provide emergency assistance, reduced subsidies and increased fiscal incomes.

In conclusion, the final advantage is that the poor get a new opportunity to escape from their unpleasant state, by being able to manage better covariant risk and diminish the impact of hazard (e.g. drought) on their livelihoods. The rainfall insurance contributes clearly to the empowerment of the poor. Furthermore, the service is sustainable and generates very limited cost for the society since the product can become self-sufficient.

c. Impact assessment: the case of an Indian village

Informal interviews with the farmers of Kalupally, small village in Mahabubnagar District in Andhra Pradesh, made clear how enthusiastic they are about the insurance project. All 36 farmers of the village were customer. They have had access to microcredit since a few years through KBS Local Area Bank. However, this didn't solve their poverty as much as expected. As they take loans, they need to repay it. But the risk to see their income source impacted by hazard is very high. Informal interviews revealed that their crop production is confronted with two major issues. On the one hand the region faced three consecutive droughts in the recent years that hindered severely income generation and the construction of a future. The droughts were particularly problematic at the start of the cultivation cycle. On the other hand, more toward the end of the crop growth, farmers find their crops, especially groundnut, squandered by rats. They are obliged to spend their nights on the fields to prevent rats of destroying their future. In turn, they are more vulnerable to illness and are absent day and night of their household.

They would like to invest their loans in production to gain higher returns. For instance, groundnut and castor are the most cultivated crops because they need very little water but also because the farmers rarely had enough resources to dare experiment in the long term other crops. *The risks to lose the investment (diversification, manure etc.) and to become unable to repay the debt are too high.* As a result, returns remain at their level, despite the loan taking. They do not say that the credit is useless, since they use it for other purposes such as consumption, health care etc. Their attitude toward savings was mitigated. These villagers pretend that they did not save significantly previously because when they had money they

used it to repay the overdue debt caused by risk factors or rarely to improve agriculture, in contrary with now. They explained that the rainfall insurance allows them to save money that will not go to loan repayment or to ex-post coping strategies but rather to take opportunities to escape the poverty cycle. The community started to save collectively for the purchase of a tractor. This will enable them to increase productivity, irrigation and cultivate much more acres of land. Finally, the insurance is also a solution for people who depend on wage employment or off-farm labour because it is not the crop in itself that is insured but rather the shortfall of rain that impacts all rural people, not only the cultivators. This has been confirmed by observation since enthusiasm seemed to have reached all the villagers.

The project has already reached a very valuable goal, i.e. to restore hope and dignity, but more results are on the way such as room for opportunity taking through better allocation of money. Although impact cannot yet be measured since the project need still to be confronted with bad scenarios, one can assure that is very promising.

d. Challenges

The rainfall Index Insurance is not a miraculous product. Weaknesses have to be addressed if the insurance is to be successful in the long term⁷⁹.

1. A major challenge in designing the rainfall insurance product was and is minimizing '**basis risk**'. Basis risk occurs when the insured has a loss and is not compensated sufficiently by the insurance to cover the loss (GlobalAgRisk Inc.). It also occurs the other way round when the insured does not incur a loss and yet receives an indemnity. Basis risk thus depends on the extent of correlation between rainfall and yield. If the rainfall index insurance is to be an effective risk management tool, correlation has to be sufficient to minimize basis risk. This is possible with a careful design of the index: threshold, coverage period, measurement, reliable data, premium etc.

The existence of the basis risk is the primary concern associated with the rainfall index insurance, but it also an opportunity for the rural banks, such as KBS Local Area Bank, to offer the possibility for individuals to manage this residual basis risk (Jerry Skees). If the rural individual or group has an independent loss when the index does not pay, they should be able to take *emergency loans* from the bank to smooth their income.

2. Measurements of the rainfall need to be done objectively and accurately to optimize the viability of the insurance. Moral hazard affecting the collection of data is more common in developing countries where institutional frameworks are weak or corrupt. Independence of the measuring party is necessary: NGOs, international (or national) meteorological associations etc. Crosschecks with nearby weather stations or the use of satellite data are other possible

⁷⁹ Adapted from Jerry Skees.

tracks. Then, the measures must be made widely available in a timely manner to assure a high degree of transparency and efficiency.

3. The index must rely on a **precise actuarial model** to allow the insurer to understand properly the statistical properties of the insurance. This requires sufficient **historical data** and the generation of likelihood predictions of various index measures to optimize the choice of the model.
4. Although this kind of insurance is simpler than traditional insurance policies, the fact that it is significantly different and new requires some **education** to help potential customers to assess if they need this risk management tool or not. Education of the providers of the product is also necessary to market the policies correctly.
5. Markets have been analysed by BASIX who possesses the adequate understanding, knowledge and contact persons. It has helped to build a marketing plan that addresses how, when, where and to whom the contracts are to be sold. The marketing plan should be kept **updated** to ensure adaptation to changing patterns.
6. Governments and institutions need to take clear positions to allow secondary markets in index insurance instruments (e.g. derivatives), and set up an appropriate **regulatory framework** to allow insurers to subscribe reinsurance. Derivatives providers are usually not licensed to reinsure in developing countries (IFC, 2003), such as India. The distribution of index insurances would be facilitated through a higher liquidity in reinsurance and the scope of availability for the poor increased.
7. KBS through BASIX acts as an **agent** for a private partner. This model relies on contract negotiated between both parties. Thus, the future of the product and of the livelihoods of the poor is related to the relationship between both. This relationship will go through various stages and conflicts. The challenge will be to maintain equitable and comprehensive relations.
8. Index insurances such as the rainfall insurance provided by KBS are very innovative products and certainly in emerging markets. Therefore they need a lot of development work that sometimes can not be recuperated in trading margins of contracts (Hess, 2003). **Facilitators and donors** (along with governments) have a place to take in the development work particularly around the described challenges but also in the follow-up.
9. The product should be made available and affordable for everybody, including the **poorest**, although they already benefit indirectly through employers and farmers. We have seen that microinsurance is particularly necessary for them, it is thus a justice issue to ensure that they can benefit from it.

Observation of the farmers' reactions on the project has revealed very high expectations. It is essential to assure that these would be met by the one who made the promises. Therefore actors must be very careful in answering the challenges before scaling up.

E. Conclusion – MicroInsurance in practice (BASIX)

The theoretical approach of microinsurance had taught us that innovation, local adaptation and a good provision model are indispensable to make microinsurance work for the poor as an efficient covariant risk management strategy. The case study of BASIX has confirmed this view and illustrated precisely innovation, adequate provision and local research, in a hostile environment where public sector and nature are the trouble shouters.

Innovation has been introduced by launching an insurance product linked to the underlying systemic risk – drought – defined as an index that measures rainfall and recorded at a regional level (local weather stations), rather than to the extent of the resulting loss (reduction in crop yields). It is also the illustration that progress in areas such as finance, agronomy, information systems, measurements, and management and organisation can serve the poor if applied correctly. For instance, the rainfall index insurance is inspired on the option system and reinsurance through the derivatives market could be considered.

The poor get a new opportunity to escape from their unpleasant state, by being able to manage better covariant risk and diminish the impact of hazard – drought – on their livelihoods. Furthermore, the service is sustainable and generates very limited cost for the society since the product can become self-sufficient.

The rainfall index insurance is a considerable project capital and time intensive while large scale results are far from immediate, although current customers are very enthusiastic and hopeful and anticipate already the effectiveness of microinsurance in case of drought. BASIX The choose of BASIX for a partner-agent model is not surprising since the rainfall insurance is resource intensive. The cost would have been unbearable for a full-service model.

The rainfall index insurance results from advanced research led by BASIX, private sector (ICICI), international organisations (World Bank) and donors. It illustrates the BASIX strategy of creating a platform that enables interaction between various players with as objective the promotion of the livelihoods of rural poor. We believe this insight of interdependence will be a growing trend in servicing the poor.

By answering carefully all the challenges one should be able to scale up the distribution, improve outreach and still ensure fast claims settlement. Then, the promised benefits⁸⁰ will become a reality in every day life of many of the rural poor.

⁸⁰ Benefits for the poor and for the MFIs detailed on p 72

SECTION 3: DOES MICROINSURANCE HAVE IMPLICATIONS FOR THE RATING OF MFIs?

Just as we have seen that microinsurance is a promising service for poverty alleviation, more and more people and organisations will see this too. In an interdependent world every evolution entails implications for its environment. An essential actor of the environment of the MFIs is the rating agency. In reason of its importance for the microfinance sector, we focus on the implications for rating agencies.

To answer the big question we raise three other questions: What are microfinance rating agencies? What are the determinants of the selected rating agencies? Does microinsurance involves changes in rating determinants? Answers on the first two questions are drawn from various literature sources mentioned in the separate part of the bibliography as well as from information disclosed by microfinance rating agencies on their websites. The third question is answered based on a questionnaire sent to rating agencies as well as the analysis of microinsurance made in Section 2. First, I will clarify the concept of rating and rating agency and three rating agencies are selected according to their leading positions and geographical spread. They are briefly described. Second, risk and performance factors of MFIs are outlined and rating determinants are highlighted out of the different rating methodologies and processes. Third, we analyse whether microinsurance has consequences on the relevance of the current rating determinants and methodologies, so that some implications can be pointed out.

CHAPTER 1. | What are Microfinance Rating Agencies?

A. What is a Conventional Rating?

"Credit ratings help investors by providing an easily recognizable simple tool that couples a possibly unknown issuer with an informative and meaningful symbol of credit quality."
(Standard & Poor's)

The term "rating" designates a grade given to an institution. It synthesizes the evaluation and provides a means of comparison with other institutions. It provides an opinion for uninformed investors, donors or other stakeholders to use in deciding whether to get involved with a particular organisation. Raters generate a score that allows investors, who know nothing about the specific business, to invest their funds according to their own risk preferences (MicroBanking Bulletin, 2001). While raters actually perform many of the same tasks and analysis as assessors, they go one step further. They must centre their attention on elements

within the organisation's activities that pose *risk* to investors (Christen, 2001). Thus, a rating is designed to produce a *simple grade* for the quality of an institution's performance that can be understood by potential investors. The "AAA", "B-" or whatever other grade send clear signals about the potential risk associated with an investment. It is the rater's job to sort through normal business risk and classify the institution according to its risk profile (Christen, 2001). Below we will define the risks that an agency has to look at and evaluate. The methodology used by the rating agencies to evaluate these risks will be discussed in next section.

- *Purpose of a Rating*

In the first place it is, for the rated company, to have access to capital markets. The rating is also there to support investor confidence, to acquire name recognition to attract direct foreign investment or donors. It is almost indispensable to negotiate liquidity lines. Finally, it can increase debt capacity of subsidiaries. A microfinance rating will have also as purpose to stimulate capacity building within the rated institution (see next chapter).

- *Advantages of a Rating*

Rating has a cost but it can have a lot of advantages for healthy organisations: (1)Compared to borrowers without a rating, rated issuers achieve higher deal volumes, longer maturities and lower overall costs. (2) Ratings are required by many international institutional investors. The number of potential investors and donors is significantly enlarged by a rating. (3) A rating is an excellent tool for financial marketing purposes and enhances the financial flexibility of an issuer on the capital markets. (4) And last but not least, global comparability and transparency.

B. What are the differences between Microfinance Rating and Conventional Rating?

"A rating mission feels like getting an X-Ray: it penetrates all layers of operations. With the capacity building orientation of the team, this X-Ray is not frightening but motivating."
*(Aregak, Armenia)*⁸¹

(1) As we will see microfinance institutions exhibit somewhat *different risks* from banks, although they are both financial institutions. Yet, the fact that banks and microfinance institutions exhibit different risks does not mean that tools to rate a bank's creditworthiness are not useful for MFIs or that the international credit rating scale cannot be shared (Christen, 2001). After all, hotels, telecommunications companies, consulting firms, mortgage

⁸¹ www.planetfinance.org

companies, and brokerage houses are all different, yet if they get an “A” rating, it means that their risks are similar.

(2) Besides differences in the risks posed by commercial banks and microfinance institutions, there are also *differences in funders' motivations*. The motivations of commercial investors – who invest their own funds in expectation of attractive returns – are significantly different from those of a donor concerned about maximizing client benefits and outreach (Christen Robert Peck, 2001). This distinction is important because it influences the market for rating and evaluation exercises. Consequently to the different funder's motivation, a rating in microfinance will provide much more information than the credit risk evaluation undertaken by traditional rating agencies such as Standard & Poor's, Moody's or Fitch. Most MFI investors are “soft money” sources whose decisions are based on a host of criteria, only one of which is financial performance and risk classification (MicroBanking Bulletin, 2001). However, new investors, such as Dexia Micro-Credit Fund, Triodos Bank, LaCif⁸² or Blue Orchard Finance⁸³, are more seriously concerned about credit and operational risks.

(3) Moreover, microfinance rating agencies differ in the amount of *financial resources* to sustain their activity. A narrow social investor market and the still unclear financial advantages for a MFI of being rated make it difficult for rating agencies to turn a profit serving this sector (Christen, 2001). Complicating matters is the dearth of qualified microfinance analysts. To address this market weakness, the Inter-American Development Bank (IDB) and CGAP recently established a pilot Rating Fund to help finance ratings/assessments of microfinance institutions by certified agencies.

Thus, a number of MFI rating agencies are forming alliances with traditional rating agencies to offer credit risk rating services. PlaNet Finance is currently developing a credit risk product with Fitch. MicroRate has established a joint venture with GRC, a South African rating agency, which results in offering credit risk rating for MFIs (GMRA). Moreover, traditional rating agencies, such as CRISIL started to assess the credit risk of MFIs. In this fast moving and growing business, the MFI rating agencies will have to develop excellence for their services.

(4) Finally, Microfinance rating differentiates from conventional along the *purpose of rating*. Clearly, for the microfinance rating agencies, capacity building of the rated organisations is a major objective, beside transparency and better access to capital. As Christen said:

⁸² LaCif is a private investment fund for Latin America based in Lima, Peru.

⁸³ Blue Orchard Finance S.A. is a Swiss asset management company specialized in micro-finance. It acts as management adviser to Dexia Asset Management for the Dexia Micro-Credit Fund.

“Attempts to please donors and to attract investors are unlikely to succeed unless based on a drive for better management and performance within each MFI. Not to do so would constitute a large missed opportunity to improve overall industry performance.” (2001, p11)

Few MFIs are regulated for their credit and savings activities and the vast majority is not supervised at all (McCord, 2003). Corporate governance mechanisms such as boards and internal and external audits are very rare. Ratings are often the only evaluation available for the external observers (investors, donors, government etc.) but also for internal purpose. MFIs use the ratings to progress towards more efficiency and sustainability.

Let us have a closer look at the mission and activities of three typical raters in order to better understand microfinance ratings⁸⁴.

C. The case of MicroRate, Planet Rating and M-CRIL

Let me briefly introduce you to the three selected agencies: MicroRate, Planet Rating and M-CRIL. The three of them consider transparency, access to capital and MFI's capacity building as their **mission**. However, Planet Rating seems to have a broader social mission towards the community. Planet Rating, as part of the non-profit organisation “PlaNet Finance”, aims to prove that microfinance is also an integral and professional component of the financial system.

As expected, all agencies have an Evaluation and a Rating **activity**. And the sector analysis of Planet Rating is carried out by the parent company PlaNetFinance. Further, the two profitable agencies (MicroRate and M-Crile) each provide a different third service with which they can gain profits out of the synergies with the evaluation activity. Whereas, Planet Rating provides non-profitable activities like trainings and online reports dissemination.

Table 10: Comparison of Activities amongst the rating agencies

	Evaluation and rating	Sector analysis	Supervision	Direct Advisory	Trainings	Active dissemination of reports
MicroRate	•	•	•			
Planet Rating	•	• *		• *	•	•
M-CRIL	•	•		•		

* not directly provided, but through PlaNet Finance

Across the various activities, we observe possible conflicts of interests for Planet Rating as well as for M-Crile. Indeed, since they provide a rating service AND direct advisory services through their parent companies⁸⁵, they could have a tendency to give a higher rating to MFIs advised by their parents. Finally, Planet Rating's evaluation carries the risk to be biased

⁸⁴ The survey is based on information disclosed on the websites of the agencies and the Rating Fund.

⁸⁵ Planet Finance, and EDA for M-CRIL

because of PlaNet Finance funding activity. In this paper, only the evaluation activity of the companies will be approached in more details. We also noticed that there is a bias for the three of them, at different degrees, to evaluate top or average MFIs, since these are the most willing to have an evaluation and also the most capable of supporting the cost. Thus, there is a solicitation effect.

Table 12 provides a brief overview of the Rating Agencies as background to the analysis in later sections.

Table 11: Overview of Rating Agencies

	MicroRate	Planet Rating	M-CRIL
Organisation	1997, Private company, based in Latin America and Africa. Independent.	1999, Non-for-profit, global with focus on Africa, division of PlaNet Finance.	1998, Private company, Asia, common ownership as EDA .
Staff	12 staff members	4 permanent analysts with international and local consultants and auditors.	10 professionals
Clients	Investors and lenders (30%), donor agencies (10%) and increasingly by MFIs themselves (60%)	Lenders, investors and donors, MFI managers, apex organisations and Central Bank and the microfinance industry, networks	Wholesale lenders, MFIs, private investment firms, and donors
Mission	Transparency, access to capital and capacity building	Transparency, access to capital, capacity building and promote MF towards community	Transparency, access to capital and capacity building
Activities	Evaluation and Rating, Supervision , Sector Analysis.	Evaluation and Rating, Online dissemination , Training , Advisory through PlaNet Finance	Evaluation and Rating, Sector Analysis, Advisory Services
Limitations	Top MFIs	Agency Risk, Efficiency	Agency Risk

In order to understand the opinions given by the rating agencies and to identify the differences between them we have to understand the different risks present in financial organisations and the way to manage them. Then, for the same reason, we investigate the associated concept of performance for microfinance institutions.

CHAPTER 2.

What are the Determinants of the Selected Microfinance ratings?

Previous chapter told us that a microfinance rating aims to come to a definitive, unqualified opinion about the:

- Current and past **performance** of the organisation
- **Risk** that its future performance will deteriorate substantially from that level.

The stakeholders of an organisation want to know if losses could occur and threaten the future of the organisation. This risk can be eliminated or mitigated but there is an opportunity cost. Hedging eliminates uncertainty but it generates a random opportunity cost!

The risk is for an organisation the ‘possible negative deviation from future target earnings’. It can be classified into two broad categories: **Business Risk and Financial Risk**. Both can be subdivided in several risks which are detailed below by means of a literature survey⁸⁶. These risks have to be taken into account by rating agencies during their evaluation.

Attention need to be paid also to the way organisations **manage the risk** (cfr. Section 2). Risk management and profitability are inseparable. Higher expected returns imply to take higher risks. But higher risks could decrease actual returns if the risk occurs. Hedging the risks immunizes the potential losses but reduces return because of the associated opportunity costs.

Organisations according to their business and their final objectives have to define a risk-return couple that optimizes their value. Thus, risk is always associated with a performance. Funds in destination of microfinance institutions have often a different intention and purpose than the capital of conventional private sector. This different capital market requires from the Rating Agencies to evaluate risk as well as performance across whole the company. The rating seeks to establish a link between risk and return. The investor tries then to optimise his risk-return preference. In the case of microfinance the preference is not oriented towards high returns for the investor but rather for the customer.

Let us overview briefly the risks and performances and then the processes and methodologies used by rating agencies to evaluate them. The risks are divided into two categories: business risks and financial risks.

A. Business Risks

Industry Risk – Each rating analysis begins with an assessment of the organisation’s environment (Standard & Poor’s⁸⁷). The many factors assessed include:

⁸⁶ J.Bessis. *Risk Management in Banking* (1998). John Wiley & Sons.

⁸⁷ In “Rating Methodology : evaluating the issuer”

- Industry prospects for growth, stability or decline
- Each organisation's competitive position
- Firm size
- The pattern of Business cycles
- Supply and demand risk

The industry risk evaluation also sets the stage for analyzing specific company risk factors and establishing the priority of these factors in the overall evaluation (S&P's). For example, if an industry is determined to be highly competitive, careful assessment of a firm's market position is stressed.

However, the sensitive microfinance sector is very specific. The rating agencies active in this industry are specialised for microfinance institutions. Consequently, their knowledge of the industry is supposed to be very high. But it is not excluded that traditional rating agencies, such as Moody's and Standard & Poor's, will enter the microfinance market if institutions want to access bigger capital markets to scale up their activities and to answer a growing demand of social investors.

Furthermore, the microfinance industry has several specific risks that have to be look at: (1) Specific credit methodologies. (2) MFI size: Size matters, but not as much as is often assumed, says the Inter-American Development Bank (IADB). Small MFIs can become more efficient simply by growing. Once portfolio size exceeds US\$3million, the importance of economies of scale diminishes rapidly and other factors become more important (IDB Technical guide). (3) Subsidies. (4) Different customer base with high vulnerabilities. (5) Climate Risk: the repayments are often conditioned to agricultural productivity which relies on weather. (6) Absence of collateral (100% of recovery risk).

Macroeconomic Risk – It is the degree of volatility present in the macroeconomic environment. It is suggested by the country's or regions' economic track record (Standard & Poor's).

Government and Regulation Risk – It is the risk that governments change the laws or rules, through restrictions on providing financial services, direct intervention in service quality and levels, altering existing barriers to entry, changing subsidies, change in taxes, etc. (S&P's). Corruption is, especially, an important issue for MFI, as microfinance activities take generally place in developing countries where corruption is often a common use (World Bank, 2004).

The rater should assess whether regulation and corruption are an issue in terms of raising costs of business or creating uncertainty, and in terms of maintaining a reasonable "level playing field" for business.

Operational Risks (J. Bessis, 1998) – The most important types of operational risk involve *breakdowns in internal controls and corporate governance*. Governance is the process by which the owners of the MFI, along with management, guide the institution to achieve the stated objectives and protect the institution's assets. Their interactions with management must assure the relationship between operations and strategy to ensure the success of the institution. Such breakdowns can lead to financial losses through error, fraud, or failure to perform in a timely manner, or cause the interests of the MFI to be compromised in some other way, for example, by its lending officers or other staff exceeding their authority or conducting business in an unethical or risky manner. Other aspects of operational risk include major failure of information technology systems or events such as major fires or other disasters. How an institution is governed, and whether it may fail to meet stakeholders (customers, donors, investors etc.) expectations because of inadequacies in systems, processes, and organization is also called 'fiduciary risk' (J. Bessis, 1998).

Management is assessed for its role in determining operational success and also for its risk tolerance. Subjective or qualitative judgments help determine each aspect of management evaluation.

An evaluation must be sensitive to potential organizational problems. According to Standard & Poor's, these include situations where:

- There is significant organizational reliance on an individual, especially one who may be close to retirement.
- The finance function and finance considerations do not receive high organizational recognition.
- The transition from entrepreneurial or family-bound to professional management has yet to be accomplished.
- A relatively large number of changes occur within a short period.
- The relationship between organizational structure and management strategy is unclear;
- Shareholders impose constraints on management prerogatives.

B. Financial Risks

Financial risk is portrayed largely through quantitative means, particularly by using financial ratios. The major financial risks for a credit institution are: credit risk, portfolio risk, liquidity risk, interest rate risk, and foreign exchange risk.

Credit Risks – According to J. Bessis, it is defined by the losses in the event of default of the borrower, OR in the event of a deterioration of the borrower's credit quality. This definition hides several underlying risks such that credit risk can be analyzed along three dimensions: Default Risk, Exposure Risk, and Recovery Risk.

Note that potential recoveries cause a difference between the amount at risk (outstanding balance at the date of default) and the loss in the event of default. For the loans of MFI to the poor no guarantees or collateral can be asked. This makes potential recoveries impossible. *Thus, the amount at risk for a MFI is equal to the total loss in the event of default.*

(1) *Default risk* – It is the probability of the event of default. Default can be defined as missing a payment obligation (J. Bessis, 1998). Rating agencies consider that payment default can be declared when a scheduled payment has not been made for a minimum period of three months after the due date.

Default risk is measured by the probability that default occurs during a given period of time and depends of the credit standing of the borrower. It is not a direct measure but it relies on historical statistics of default. Most commonly, the ratio of defaults in a given period over the total borrowers will be derived. Most of the MFIs use the repayment rate as indicator for the default risk. Note that this ratio does not capture expected default probabilities. The Portfolio at risk (PAR) measure does this.

(2) *Exposure risk* – Exposure risk is generated by the uncertainty prevailing with future amounts at risk. For the credits for which there is a repayment schedule, the exposure risk can be considered as small or negligible (J. Bessis, 1998). This implies for the rating agencies the importance to evaluate the quality of the repayment schedules set by institutions.

(3) *Recovery Risk* – The recoveries in the event of default are not predictable and depend upon the type of default and the guaranties. This risk can be considered as irrelevant for microfinance because of the absence of collaterals given by the poor, in most of the cases.

Credit risk and potential losses – The resulting expected loss L is random and can be seen as the product of a random variable characterizing default D (%), an uncertain exposure E (value) and an uncertain recovery rate R (%) (J.Bessis, 1998).

$$L = D \times E \times (1-R) \quad \longrightarrow \quad L = D \times E$$

As mentioned above, recovery rate for microfinance (for the poor) can be assumed as zero.

Portfolio Risk (Bodie, Kane and Marcus, 2002) – MFIs possess portfolio of loans. This implies that there is a credit risk associated to this portfolio caused by the aggregation of credit risks. The aggregation operation is not arithmetic, it means that the sum of two risks, 1+1, is not to 2 but is in the range of 0 and 2. This is the result of the diversification effect or “portfolio effect”. The basic principle of diversification is that not all risks will occur at the same time. This allows financial institutions to operate with a much lower capital than the total of all possible losses.

Note that this approach, commonly accepted, is highly intuitive. It should not dispense rating agencies to measure and quantify the benefits of diversification. This can be done through the volatility of losses, the unexpected loss given a tolerance level (Value at risk, VAR) or the correlations analysis.

Liquidity Risk – It is considered as a major risk. It is the ability to raise funds at a reasonable cost. Extreme illiquidity can result in bankruptcy. Such condition is often the outcome of other risks, like important losses due to the default of a big customer (J. Besis, 1998).

Rated organisations face the risk of being downgraded by a rating agency and consequently have a higher financing cost. This could bring the organisation in financial distress if they cannot face this new increase in expenses.

Interest rate risk – It is the risk of declining earnings due to the movements of interest rates. It is an essential risk for banks and financial institutions because their activities generate earnings and expenses tied to the interest rates.

The earnings of the MFI that operates credits will decrease if the market interest rates increase because, then, their loans will provide a smaller return compared to the market, unless rates are locked in up to maturity. The changes in interest rates affect also the demand for financial services since most of the prices are based on the interest rate.

Foreign exchange risk – It is the risk of declining earnings due to the movements of the foreign exchange rates. This occurs when activities are international and generate earnings and expenses in other currencies.

For a MFI it could happen if it has stretched its activities over different countries or if it acquire funds (e.g. from donors) in another country than its operating country. Assume a MFI, such as BASIX, who gives credit in India and receives funds from Europe. If the exchange rate, €/Rs., increases, then the value of the financing decreases and the MFI loses money. Thus, it is the role of the rating agency to evaluate the existence of the foreign exchange risk as well as the acts undertaken to hedge it.

C. Performance

The mission of development finance drives all MFI in a way or another. Parts of them achieve this through for-profit services. Mark Schreiner⁸⁸ defines performance, for subsidised Development Finance Institutions (DFIs, which includes MFI), as *progress toward the mission of development finance*. This mission is to make the lives of poor people better. DFIs do this by producing outreach, loans and deposits used by the poor, but now also insurance. Further, measuring performance sparks better performance and casts light on bad performance

⁸⁸ in “A Framework For Measuring the Performance and Sustainability of Subsidised Development Finance Institutions” (1999)

(Von Pischke, 1996). According to Schreiner, measurement is worthwhile if it leads to benefits from better performances that are more than the costs of measurement.

The performance of MFIs affects five groups of stakeholders: customers, society, donors, managers, and investors. Each group has its own goals and has different requirements about performance (Mark Schreiner, 1996 & 1999). No single indicator answers any single question, let alone all the questions. The measure of performance is qualitative as well as quantitative.

Most of the indicators that are used to evaluate a financial institution are derived from data taken from two financial statements, the Income Statement and the Balance Sheet. However, the financial reporting practices of non-regulated financial institutions very often do not conform to standard conventions of accounting (CGAP, 2003). This is why a number of **adjustments** have to be made by MFIs or by the rating agencies to enable bench marking and have an unbiased opinion. Adjustments concern especially subsidy, inflation, non-performing loans and foreign exchange (Christen, 1999).

Good performance **indicators** tell to the analyst and the organisation what to change and how much to change. Useful indicators are also tools to assess the evolution and to set goals (Schreiner, 1996). Indicators appear most of the time under the form of ratios. Nevertheless, ratios can be harmful and should be treated carefully. The CGAP developed consensus guidelines⁸⁹ for the financial terms and ratios. This project was initiated by MicroRate and has been contributed by, among others, PlaNet Finance and M-CRIL. It divides the most common performance ratios into four categories:

- Profitability and Sustainability
- Management of assets and liabilities
- Portfolio quality
- Efficiency and Productivity

These four categories are the major determinants evaluated by rating agencies during the evaluation of performance⁹⁰. During the MFI rating perspectives of donors, investors and managers are considered⁹¹.

In conclusion, we have a better view of what can theoretically be rated in microfinance institutions along risks and performance and why it should be done. The way it is done in reality is slightly different, but the differences among rating agencies rather emerge from how an organisation is rated and with which depth of analysis determinants are approached.

⁸⁹ CGAP, The World Bank Group (2003), “Definitions of Selected Financial Terms, Ratios, and Adjustments for Microfinance”, *Microfinance Consensus Guidelines*, Third edition.

⁹⁰ For more detailed information refer to the Christen (1999) and CGAP (Consensus Guidelines, 2003)

⁹¹ For more details on the different perspectives of performance refer to Mark Schreiner (1999)

Therefore, the rating processes and methodologies from the three selected rating agencies are examined more closely.

D. Comparison of Rating Processes

Risks and performances susceptible of evaluation have briefly been identified. Rating agencies follow very precise paths to set up their ratings as standardized as possible so that bench marking can be effectuated with objectivity and rigour. A survey has been conducted about the process followed by the three selected rating agencies. Information has been generated from published reports, internet resources, e-mail conversations and informed observers. For the sake of concision, only the conclusions are presented here, in Table 13.

The exhaustive draft document is available on demand.

For the three cases, processes are well established and systematic. We noted no major differences between processes. The scales of grades are slightly different. MicroRate through its grade does only provide a recommendation regarding the creditworthiness. Planet Rating procures a global rating as well as individual ratings. These can be very useful for specific capacity building.

Table 12 : Comparative Table of Rating Processes

	MicroRate	Planet Rating	M-CRIL
Team	2 analysts; 5days on site; total around 22 days	2 analysts (+local consultants); 1-2 weeks on field; 5 weeks in total	At least 2 professionals; 4-5 days; total 16-25 days.
Process	<ul style="list-style-type: none"> ■ Sending questionnaire ■ Study of background information ■ Meeting management on site ■ Operation review ■ Management debriefing on initial results ■ Descriptive rating report ■ Confidential management letter ■ One-year tracking 	<ul style="list-style-type: none"> ■ Sending questionnaire ■ Study of background information ■ Meeting with management, staff, directors and clients on site ■ Operations review ■ Management debriefing on initial results ■ Descriptive rating report ■ Sent to MFI for comment or to client for review ■ Validated by Director and presented to Rating Committee ■ Confidential management letter ■ The report is published online 	<ul style="list-style-type: none"> ■ Study of background information ■ Meeting with management, staff, directors and clients on site ■ Operations review ■ Management debriefing on initial results ■ Descriptive rating report ■ Review and sent to MFI for comments ■ Rating committee ■ Submission to client
Grades	Opinion on creditworthiness: Recommend/Observe/Caution	<ul style="list-style-type: none"> - Rating of GIRAFE Domains (a-e), - Global Rating 11 grades (A-E) including + and – trends. 	10 grades: α , β and γ with + and – nuances + separate category rating. Reflects risks and recommendation.
Reports	Short (10-15) analytical report with benchmarking comparisons. Well balanced in both factual and performance analysis. Clear credit opinion.	3 pages rating summary and explanation with financing needs. Around 35 pages details about rated domains. Broad picture of MFI and context.	15-25 pages with clear rating explanation and recommendation. Many graphs, factual and performance analysis.
Disclosure of report	Only with consent of the evaluated MFI. 1 page summary available on website.	Published on the PlaNet Finance website, upon consent of the parties. Free of charge	Only with consent of the evaluated MFI
Disclosure of Methodology	Only focus points. Very restrictive	Available	Some key elements.

E. Comparison of methodologies and determinants

The survey also examined the methodologies and determinants used by the three rating agencies. Again only the results are presented here. We observed that the three rating agencies undertake their evaluation in three common broad areas. We will call them:

1. Organisation
2. Operation
3. Finance

Table 14 summarizes the determinants of the methodologies in comparison with each other.

Table 13 : Comparative Table of Rating Methodologies

	MicroRate	Planet Rating	M-CRIL
Methodology	Initial Full Evaluation of 5 core areas : Portfolio quality, management and governance, credit operations, Management Information, System financial conditions. + Annual updates and Preliminary Credit Assessment. Growth, Benchmarking	GIRAFE covers 6 key areas: Governance and decision-making, Information and management tools, Risks : analysis and control, Activities and loan portfolio, Funding and liquidity, Efficiency and profitability. Trends and Context	The rating instrument measures Organisational and governance aspects, Managerial and Resource strengths, financial performance. Context, strength of clients , min. conditions
Tools	Experience → Indicators → Experience	Experience → 19 scored Indicators for scoring of 6 areas and composite score → Experience	Experience → 30 weighted and scored indicators for composite scoring → Experience
Qualitative & Quantitative	Despite the fact that MicroRate uses quantitative performance indicators to assess productivity, efficiency, financial situation and profitability, it seems that these remain tools. No rigid formula. Qualitative opinion.	Quantitative methodology with 57% qualitative indicators, focussed more on G, I and R, 43% quantitative focussed more on E. A and F are equally distributed. Qualitative opinion of rating committee. Medium Qualitative .	A quantitative methodology based on a qualitative knowledge of microfinance and subject to a qualitative opinion by a committee. Most quantitative of the three.
Risk & Performance	Risk based financial and institutional analysis. Strengths and weaknesses of the financial and operational performance with focus on risky areas, especially credit risk . <u>Most Risk based</u>	Evaluates Performance as well as institutional and financial risks through Financial, Organizational and Operational sustainability . <u>Most Performance based</u>	Assess relatively the creditworthiness in terms of absorptive capacity and to provide an estimate of credit risk. Assess strength and weaknesses of the operational, financial and organisational performance. Medium
Approach bias	Important benchmarking and strong financial approach. <u>Medium credit risk focussed</u>	E and A biggest drivers, then G. More focus on Management performance than Risk. More focus on operational Risk than credit risk. <u>Less credit risk focussed</u>	Organisational (16%), management (38%), financial indicators (46%). Focus on specific Financial risks and Performances and managerial efficiency. <u>Most focussed on credit Risk</u>
Limitations	No consultancy service, no affiliation to networks to avoid conflict of interests	Flexibility of model? relation with PlaNet Finance	Flexibility of model? relation with EDA

CHAPTER 3. | Which Problems does Microinsurance bring in for the Ratings?

Microinsurance and the rating are now each separately well understood. However, the evolution of microcredit towards microfinance through the emergence of new services such as microinsurance has an impact on the environment. The rating activity does not make an exception to that. Despite similarities, it is admitted that traditional insurer ratings are quite different from the ratings of the other financial institutions. For instance, the purposes of insurer ratings are different (Pottier W.S. and Sommer W.D., 1999). There is a change in the concerned stakeholders. The primary users of insurer ratings are not anymore only the investors but also more the insurance consumers and the agents who market insurance to consumers. In the commercial market we observe that A.M. Best appears to be the agency of choice for most of the insurers for a first rating rather than S&P or Moody's. This fact should raise serious questions for the microfinance agencies about their future evolution. However, the argument of the change in the concerned stakeholders does not hold very much for microfinance rating agencies that are already concerned by these other stakeholders. In consequence, we would like to know (1) whether there are other issues justifying a different approach to rating, (2) and if yes, what the implications are.

A brief *questionnaire* has been sent to the three discussed rating agencies: MicroRate, Planet Rating⁹² and M-CRIL. It has permit to gather information to establish roughly the current situation and the opinions toward microinsurance. The current situation is pretty embryonic. Planet Rating has not yet carried out rating for insurance providers. MicroRate did not meet a case where insurance was a significant risk for the organisation. But both agree that when they will encounter the problem necessary adaptation will be implemented. In the case of M-CRIL they have faced microinsurance in their rating missions (e.g. BASIX) but do not seem to have adopted special treatment for that. Everybody agree that something will have to change. This chapter is aimed to give indices to find what should change based on microinsurance specificities.

(1) Damian von Stauffenberg, founder and principal of MicroRate, and Alice Nègre, Director of Planet Rating, both agree that microinsurance introduces new risks for the MFIs. In consequence and in regard of chapter 2 of this section, I identified changes along the '**financial risks' on the one hand, and 'business risks'**', on the other hand. I divided these changes into two cases of mainstream insurance provision: **the 'full service model' and the 'partner-agent model'** (see p 76).

⁹² Damian von Stauffenberg for MicroRate and Alice Nègre for Planet Rating

First, an institution can choose to act itself as insurer. This is the full service model. In general they insure independent risks (e.g. health, life, livestock etc.) in order to limit the exposure to systemic hazard. The client has transferred his risk to the MFI. It means that in case of risk event it is the MFI that is impacted and has to disburse. This clearly affects the creditworthiness of the organisation. And it is this **creditworthiness** that is especially evaluated by raters. There is thus an additional credit risk related to the microinsurance provision. Although, as noted by von Stauffenberg, so far, for most of them, insurance premiums are very high and the products are often very profitable. But as markets become more competitive, insurance products will have to be priced competitively as well, and the credit risk will increase. It can be very threatening for the other services such as microcredit and savings but also support activities.

Within financial risks, beside credit risk, there is **basis risk**. If the insured has a loss there is a risk his loss is not compensated sufficiently by the insurance. The mission would then not be achieved. If the insured does not incur a loss there is a risk that he still receives an indemnity. It would then affect the creditworthiness of the MFI. The MFI needs to minimize '*basis risk*' by assuring an optimal correlation between rainfall and yield.

The business risks of an insurer MFI do also increase since a new product is introduced. They are related to the design of the product, the demand for it, and the knowledge and understanding acquired by the employees. Fiduciary risk is much higher since errors are much more likely to occur. Moreover, the risk exist that confusion is created between credit and insurance activities and that the accountability, organisation, overhead etc. get mixed up. The mix of insurance provision and other financial services is dangerous. Profits and losses for both businesses need to be separated.

Second, in many cases (e.g. BASIS), the MFI does not provide insurance itself but in partnership. This is the partner-agent model. MFIs providing covariant risk insurances are certainly in this case. The MFI acts as an agent, point of sale, for an insurance company to whom the risk is transferred. The MFI can thus offer an additional product and earn a commission without assuming credit risk.

The partner-agent model reduces significantly the fiduciary risk since the MFI can share knowledge and understanding with the insurance company. It is certainly not at the same level as previously because demand risk and the risk that employees make mistakes still exist. Further, agents face new risks caused by the nature of their contract with the partner. On the one hand the risk is transferred; on the other hand the MFI is still partly responsible for the success of the product. Thus, they still bear a basis risk. In short, they are bound to the success

of the product (its design) by their mission of outreach and poverty reduction (some of them) and by their contract with the insurer.

(2)The implications for microfinance rating agencies are threefold: Modification of determinants, pro-cyclical issue, and adaptation of resources.

First, **determinants** and factors have to be completed and modified. For the case of full provision, credit risk will clearly take even more importance. But the attention is different than for the credit risk resulting from the microcredit activity where repayment rate is the predominant factor. Here, credit risk is driven by a portfolio risk depending on the type of insured risk, and by a basis risk. Basis risk measurement should be introduced in the rating determinants. More, the importance of the human resources and their competences, and information systems should probably gain in weight in the rating with the emergence of microinsurance. Actuarial skills, insurance expertise are indispensable to make the service successful for the poor. Further, for the partner-agent model special attention must be paid to the quality and terms of the contract between. All these differences with the past can only be answered with modified determinants.

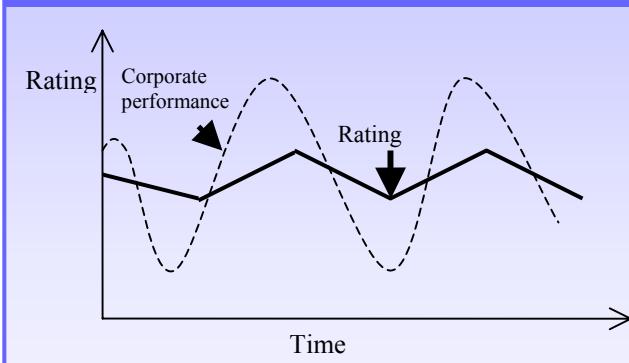
Second, if the insurance concerns **cyclical** risks such as weather, production or diseases, the possibility exists that the cyclicity of the hazard is transferred to the performance of the MFI. Agencies should take this possibility into account. S&P argues that the ideal is to rate “through the cycle”. There is no point in assigning high ratings to an organisation enjoying peak prosperity if that performance level is expected to be only temporary. Similarly, there is no need to lower it.

However, rating through the cycle is often the incorrect model for two reasons (S&P’s):

1. Rating through the cycle requires an ability to predict the cyclical pattern—and this is usually difficult to do. If indeed there is such a thing as “normal” cycle, it is rare.
2. Moreover, even predictable cycles can affect individual firms so as to have a lasting impact on credit quality.

Accordingly, ratings may well be adjusted with the phases of a cycle. Normally, however, the range of the ratings would not fully mirror the amplitude of the company’s cyclical highs or lows, given the expectation that a cyclical pattern will persist. The expectation of change from the current performance level—for better or worse—would temper any rating action,

Figure 15: Cycle-Rating Relationship



even absent a totally clear picture of the cyclical pattern.

Third, the microfinance rating agencies face growing complexities in the evaluation of MFIs. Microinsurance contributes to this. As we have seen, insurance seem to be a different business with different risk factors. Further, the addition of a new product range to the MFIs' activities results also in more complicated organisational structures. Microfinance rating agencies will have to "develop expertise to judge whether the risks are present and whether they are managed or covered", said Mr von Stauffenberg⁹³. Therefore, more capacity and know-how need to be acquired by agencies. In short, *resources* must be broadened and adapted. This would signify a serious problem for agencies since these are too small to be able to afford an insurance specialist as a full-time staff member. So, either they will have to train own employees, but it is not certain that they will be as qualified as specialists; either expertise will be acquired through external consultants or partnerships. Another possibility is to mix both by, for instance, outsourcing in a first phase and then internalise the process thanks to the acquired knowledge. The second phase might also never happen because of a potential growing insurance complexity and thus a growing need for advanced expertise.

The three implications of microinsurance – modification of determinants, pro-cyclicality issue and adapted resources – are not exhaustive but represent future challenges for the microfinance rating agencies if they want to continue their mission of transparency, access to capital and MFI's capacity building along the microfinance evolution.

⁹³ cited from the questionnaire

CONCLUSION:

How to alleviate poverty by reducing the impact of hazard?

1. “Is poverty inevitably the norm?”

A. Is poverty the norm?

The question appears to have no precise answer, because a picture of the world poverty must take into consideration the dynamics of poverty (chronic, transient, cyclical) and the huge disparities among countries and regions. In some parts of the world signs of mass poverty reduction exist. However, in many regions of the world (e.g. South Asia and Sub-Saharan Africa) poverty is not the exception but rather the rule, the norm. Poverty is increasingly the norm in rural areas. **75 percent of the extremely poor are rural.** However, urban and rural areas are as much concerned by poverty. Even if urban and rural poverty differ from each other, both are strongly related. Rural poverty indeed strongly influences urban poverty. Many economists, as well as the World Bank, argue that growth relieves poverty most efficiently. Research has shown that *the sector of growth does matter for poverty alleviation and that it needs to be agriculture-led in the poorer continents.* Thus, improvements in agriculture productivity and efficiency in developing countries should substantially alleviate both rural and urban poverty, reduce local and regional inequalities and enhance economic growth.

B. Is poverty inevitable?

There is evidence of drastic changes in poverty. Over the past thirty years, illiteracy was cut by half and life expectancy in poor countries increased by eight years. The Human Development Report 2003 has listed several significant examples.

The good news brought by recent progress in poverty analyses and observation is that *poverty is avoidable.* One possible way to avoid it is focussing on agricultural production and its positive correlation with rural poverty, which in turn is correlated with urban poverty and global economy. Agricultural production encounters many difficulties, of which local conditions such as environmental and climatic risk factors. Since agriculture is very sensitive to these risks, ***the rural poor are very vulnerable to hazards, especially climatic events.*** As a result, a solution that would reduce the impact of hazard (e.g. climatic) on the life of the poor might be able to alleviate poverty. Such solutions are ideally based on innovation and successful, existing mechanisms, of which the efficiency is enhanced and the shortcomings solved. The chosen basis is the famous microcredit model.

C. What does microcredit teach us?

(1) Lending is not the problem for microfinance institutions, but rather being reimbursed.

Repayment problems are apparently caused by two mainstream phenomena:

- Information asymmetry, and
- Hazard.

Microcredit offers a solution to the repayment problem solely caused by information asymmetry and absence of collaterals. Four ***particular mechanisms*** make this possible: group lending, dynamic incentives, regular repayment schedules and collateral substitutes. *However, the regular repayment schedules have an important drawback for households with unstable and non-diversified incomes* as they are particularly vulnerable to hazard. Either these vulnerable households will exclude themselves from credit access or, if they don't, they will probably have to face an indebtedness spiral. Collateral substitutes present an interesting path to solve repayment problem caused by hazard and enhance access to microcredit for these vulnerable poor. For instance, insurance mechanisms do solve the repayment problem due to hazard, whereas alone microcredit doesn't.

(2) Microcredit faces a number of ***Challenges***. Although microfinance offers an effective institutional structure to provide credit to the poor, the **scale** problem needs to be resolved so that it can reach the vast majority of potential customers that demands access to financing at market rates. This is possible through expanding financial services such as savings and collateral substitutes. But there is also a clear opportunity for microfinance organisations to consider new relationships with private sector companies who possess both the right motivation to address the bottom of the pyramid and sufficient resources, for scaling up their activities. Microfinance institutions and NGOs could share their experience and know-how in addressing the needs of the poor and help companies modify their business model assumptions (Prahalad and Hart, 1999). However, poverty reduction needs to remain a core issue in MFIs' negotiation and governance with the private sector. Given the benefits that result from a **strengthened link** between local and global enterprises (e.g. access to more resources for greater outreach and higher discipline), newly developed tools (see below) should make new linkages all the more attractive. A broadened resource base achieved through a broader client base and/or wider product and service range may then support **capacity building** of the institution. Furthermore, microfinance needs to shift from its dependence on subsidies and its charity orientation, to one of self-sufficiency and financial **sustainability** to provide adequate financial services and continually increase its outreach.

This is indispensable to make MFIs accountable to the poor and optimize donors' funds. Appropriate **regulation** should allow operations such as international funding for instance and enable recognition of the special status of microfinance.

(3) The effectiveness of microcredit has been analysed. Microcredit presents very valuable **strengths**: cost effectiveness, powerful leverage effect of donors and state funds, potential financial sustainability. Some **weaknesses** need to be addressed to improve microcredit as poverty reduction tool. The system lacks universality (e.g. times of crises, displaced populations etc.), and it sometimes creates **indebtedness** problems for who cannot repay regularly because of cyclical or single source incomes which results in harmful **social pressure**. Reaching the poor is not at odds with maintaining the excellent financial performance and professional business practices. Programs that make poverty reductions an explicit goal and make it a part of their organizational culture are far more effective at reaching poor households than those that value finance above all else. Microcredit does have positive **impacts** on income and vulnerability reduction resulting in improvements in six of the Millennium Development Goals. Children's education, health outcomes of women and children, unbounded labourers, and empowerment of women are very important outcomes of microcredit schemes.

Nevertheless, the system's **outreach** is still a questionable shortcoming. We noted three different problems related to outreach and risk. First, too often the poorest have no access to financial services. It is caused either by self-exclusion, by assumptions of the other actors (social exclusion) or through misconceptions of the financial product. Often their income sources are not certain and diversified enough in order to assure them a certain level of stable earnings necessary to make weekly repayments. Second, when the poorest do have access and take part in microcredit programs they seem to receive few direct benefits for the increase of their income. This is because microcredit enhances the risk of these borrowers (indebtedness spiral), although it reduces risks of the better-off borrowers. *Consequently, for the poorest, the impact of hazard becomes more important if the hazardous event occurs*, unless they use the credit to confine themselves to low-risk low-return activity that will not increase their income. Third, the benefits of reduced vulnerability that some of the poor receive indirectly could be provided more efficiently (directly) through alternative assistance strategies, since informal alternative strategies are expensive and not available for the poorest. Thus, there is a stringent need to develop formal strategies that reduce vulnerability and the impact of hazard,

especially for the poorest, and enhance efficiency (higher repayment rate and better sustainability) and outreach of microcredit.

(4) Besides the particular mechanisms and strengths, microcredit has taught us something about poverty alleviation strategies. Strategies should be **demand-driven**, starting with the poor, going beyond commonly accepted ideas. **Continuous innovation** is another key to a successful strategy. One-shot innovation is not enough since no single model offers the eternal panacea (Von Pischke, 1997). Eventually, a poverty alleviation strategy should **leverage** activities of other parties (NGOs, state).

2. The MicroInsurance Promise?

A. How can the problem of risk be solved to alleviate poverty?

We found that the risk management process of the poor has to be transformed or completed. The poor are very vulnerable but have little or no access to **efficient risk management** strategies. Informal strategies show considerable limitations and correlated risk causes huge impacts on the livelihoods of the poor as well as on the efficiency of existing group-based informal mechanisms (e.g. family solidarity) and other formal financial services such as credit or Self-Help Groups. Note that the purpose is not to replace these mechanisms and services, but to leverage their use.

We found that the **risk management** process of the poor has to be transformed or completed by giving access to new opportunities. In this way the poor become more empowered through the possibility to make choices. The new opportunity that is proposed to reduce the impact of covariant risk should be an efficient formal risk management tool. Insurance for the poor – microinsurance – could be such as new opportunity. It is a system to protect poor people against specific shocks, using risk pooling, in return for regular affordable premium payments proportionate to the likelihood and cost of the risk involved. However, covariant risk seems a priori uninsurable. Although insurance is much cheaper for risk reduction purpose than credit and savings, the risk pooling seems inefficient for correlated risks. Financial innovation can remedy these systemic covariant risks limitations, except maybe for the biggest catastrophic risks occurring every 50-100 years that should still be covered by governments. Some indices exist for weather markets, index based insurance, catastrophe bonds and blending capital markets with reinsurance markets.

B. Where does demand for microinsurance arise from?

Three origins were identified: gaps in informal insurances, gaps in conventional insurance and gaps in microcredit and savings programs.

Formal microinsurance emerges out of the limitations of *informal insurance*: (1) the lack of access for women and the poorest since they are often socially excluded and cannot rely on family resources, (2) the high costs for the community, (3) the lack of efficiency, and (4) the impact of aggregate shocks affecting all the insured members of a group based mechanism simultaneously and making informal insurance ineffective.

Microinsurance fills also the gaps in *conventional insurance*: (1) a lack of supply towards the poor due to wrong assumptions, (2) non-adapted supply causing high costs for the customer (transportation, no clear information) and for the insurer (high information asymmetry).

Finally, providing microinsurance to the poor arises from weaknesses of *microcredit and savings models*. First, *on the demand side*: (1) access or outreach for the most vulnerable (the poorest): unstable incomes and the impact of hazards makes that the ability to repay a certain amount of money is uncertain. Some will operate self-exclusion to avoid this risk and thus lose an opportunity to escape poverty. (2) Others will choose to take the indebtedness risk. The less-poor have the necessary resources to cope with the risk but the bottom-down poor do not have as much risk management opportunities. These will be forced to adopt low risk-return profiles in order to manage their credit risk. As a result their income does not increase since the return of their activity is low. (3) Covariate risks result, for the poorest as well as the better-off poor, in indebtedness spiral since informal group-based mechanisms (e.g. family solidarity) are useless due to the aggregate nature of the shock, (4) credit and savings are far more costly for the clients for the protection of certain risks. *On the supply side*: (1) regular repayment schedules face difficulties with seasonal and single source incomes. The problem is particularly sharp for rural credit. (2) group-based credit schemes discourage voluntary savings because of the potential repayment problem of the members.

C. Which are the benefits and costs of microinsurance for the poor and the MFIs?

The *insured* gains: (1) protection of his financial (stable incomes), social (family) and human (e.g. education) capital, (2) access to credit if previously unbankable, (3) the opportunity to choose high risk-return activities with covered risk, (4) empowerment, (5) reduced cost of production (agricultural and industrial), (6) dignity, (7) leveraged informal mechanisms. Microinsurance benefits to *all the poor* not only the insured. The costs for the insured are very few: premium, claim settlement, risk of collapse of insurer, basis risk.

The benefits and costs for *MFIs* (full service model) need also to be weighted. Benefits are: (1) mission achievement, (2) scalability thanks to improved sustainability and outreach of microcredit and savings programmes, (3) broadened resource base and capacity building, and

(4) leveraged donors' and state funds. The costs are heavy: (1) management of a different risk structure, (2) acquisition of competences and resources, (3) basis risk (too much compensation), (4) loss of focus, (5) potential cannibalisation, and (6) compliance with regulations (e.g. capital requirements). MFIs also put at risk the capital and confidence of the poor. Such organisations are often still vulnerable and should be careful to not sacrifice their credit and savings that already contribute to poverty alleviation.

D. Which provision model?

As costs for MFIs are heavy, our initial assumption that microinsurance would fully provided by microfinance institutions has to be revised so, that other provision models should be investigated. We evaluate five models: the partnership model, the community-based model, the provider model, the social-protection model and the full-service model. It is the partnership model that outsets sufficiently most of the costs associated to microinsurance, although some basic products (life insurance) are good candidates for the full-service model. However, no single model suits all needs. Every situation will have its own solution. The partnership model shows the most benefits for covariant risks since the insurance risk is not supported by society or by organisations with limited management capacity, but by regulated private insurers.

Because of the substantial benefits for both the poor and the MFIs through the complementarity with credit and savings and through the reduction of the impact of hazard, microinsurance is very promising for large scale poverty reduction. Nevertheless, implementation of successful insurance schemes is the key. Therefore local research is needed to provide solutions to insurability.

E. BASIX – Microinsurance in practice

The case study of BASIX confirms the theoretical findings and illustrates how innovation, adapted provision and local research can make microinsurance work for the poor by reducing the impact of hazard on their lives, in a hostile environment where the public sector (with inefficient and costly crop insurances) and nature are major trouble shouters.

Innovation has been introduced by launching a 'rainfall index insurance' linked to the underlying systemic risk – drought – defined as an index that measures rainfall and recorded at a regional level (local weather stations), rather than to the extent of the resulting loss in crop yields. The rainfall insurance does not suffer from the usual moral hazard and adverse selection and high administration cost problems of traditional crop insurance, and it is therefore better suited to serve small farmers (P. Varangis, 2003). BASIX and KBS are also the illustration that progress in areas such as finance, agronomy, information systems, measurements, management and organisation can serve the poor if applied correctly. For

instance, BASIX rainfall index insurance is derived from a European put option structure where the option price is the cost of the coverage and the strike is the rainfall threshold below which an indemnity is triggered. And the derivatives market may reinsure the risk of the poor on the global market.

The poor get a new opportunity to escape from their unpleasant state, by being able to manage better covariant risk and diminish the impact of drought on their livelihoods. Furthermore, the service is sustainable and generates very limited cost for the society since the product can become self-sufficient.

The rainfall index insurance is a considerable project. It is capital and time intensive while large scale results are far from immediate, although current customers are very enthusiastic, full of hope and anticipate already the effectiveness of the policy in case of drought. The choice of BASIX for a partner-agent model is not surprising since the rainfall insurance is resource intensive. The cost would have been unbearable in case of a full-service model.

The rainfall index insurance results from advanced research led by BASIX, the private sector (ICICI Lombard), international organisations (World Bank) and donors. It illustrates the BASIX strategy of creating a platform that enables interaction between various players with as objective the promotion of the livelihoods of rural poor. We believe this insight of interdependence will be a growing trend in servicing the poor.

Quite a lot of challenges need to be addressed (minimizing basis risk, precise actuarial model, independent large scale measurement, education to insurance, partner-agent relationship management, affordable for the poorest) but we find KBS should be able to scale up the distribution, improve outreach and still ensure fast claims settlement. Then, the promised benefits⁹⁴ will become a reality in the every day life of many rural poor.

3. Does microinsurance have implications for the rating of MFIs?

Given that microinsurance is a promising service for poverty alleviation, more and more people and organisations will proceed with it. In an interdependent world every evolution entails implications for its environment. An essential actor of the environment of the MFIs is the microfinance rating agency which is different from conventional rating: evaluated risks, funder's motivation, purpose of rating, resources. The cases of MicroRate, Planet Rating and M-CRIL confirm this difference.

Because of the importance of the rating for the microfinance sector, we focussed on the implications of microinsurance. The current position of rating agencies towards

⁹⁴ Benefits for the poor and for the MFIs are detailed earlier

microinsurance is pretty embryonic. But raters agree that when they will encounter the problem necessary adaptations will be implemented⁹⁵.

Changes brought in by microinsurance are identified along financial and business risks. In the case of a full-service model, the MFI has an increased credit risk and a new basis risk, and is more exposed to demand risk, fiduciary risk and mistakes in design. In the case of a partner-agent model (e.g. BASIX), mistakes are minimized but by contract the mission of the MFI becomes dependant on the partner's will.

The implications for microfinance rating agencies are threefold: (1) the determinants of the evaluation procedure need to be modified. The portfolio risk and basis risk components of credit risk should be measured and receive more weights. Human resources, competences and skills, and information systems should also gain in weight. And contract analysis becomes necessary in case of partner-agent model. (2) The rating must take into account the cyclicalities of MFIs' performance and risks due to the transfer of the cyclicalities of the poor (e.g. weather risk). (3) The raters' resources must be broadened or adapted to the growing complexity of organisations and services to which microinsurance contributes. New expertise should be acquired either by training of unqualified employees, by external consultants or through partnerships with resourceful qualified institutions. A mix of internalisation and externalisation may also be considered. These three implications of microinsurance are not exhaustive but represent future challenges for the microfinance rating agencies if they want to continue their mission of transparency, access to capital and MFI's capacity building along the microfinance evolution.

In conclusion, we demonstrated that microinsurance does alleviate poverty by reducing the impact of hazard. The study has been specifically conducted for covariant hazards such as droughts in rural areas. The case of rainfall index insurance at BASIX illustrates that the success of microinsurance depends highly on its implementation and thus on the organisation's capabilities. Only then, the promising benefits will be reality for the poor.

Therefore, careful evaluation of organisations providing microinsurance is necessary. Microinsurance introduces new risks to MFIs. The methodologies of rating agencies should take into account the real implications of microinsurance on the MFIs.

Microinsurance is thus a useful complement to, rather than a substitute for, savings and credit in protecting the poor against risk and allows them to retain and develop financial, social and human capital in the long term.

⁹⁵ Information has been gathered with a brief questionnaire sent to the discussed rating agencies.

BIBLIOGRAPHY

Alderman, H., Cord, L., Chaudhury, N., Cornelius, C., Okidegbe, N., C.D. Scott and S. Schonberger (2001), "Rural Poverty", draft for comments.

Alderman, Harold and Paxson, Christina (1992), "Do the Poor Insure? A Synthesis of the Literature on Risk and Consumption in Developing Countries," Policy Research Working Paper No. 1008, Washington, D.C.: The World Bank.

Anderson, Jock R. (2001), "Risk management in rural development", Rural strategy background paper #7, The World Bank.

Bakshi, R.S. (2002), "Strategies for Indian insurance companies – Post liberalisation", *Vision: The journal of Business perspective*, July-December 2002, pp41-52

Baulch, Bob and Edoardo Masset, "Do monetary and non-monetary indicators tell the same story about chronic poverty? A study of Vietnam in the 1990s", CPRC Working Paper no 17, Institute of Development Studies, University of Sussex

Barry, N. (1995), "The Missing Links: Financial System that Works for the Majority," Women's World Banking, New York.

BASIX (2003), "Annual Report 2002-03: BASICS Ltd", Hyderabad.

BASIX (2002), "Annual Report 2001-02: BASICS Ltd", Hyderabad.

BASIX (2003), "Report of directors to the members of Krishna Bhima Samruddhi Local Area Bank Limited", KBS, India.

Birla, K.K. (2003), "The future has started", Hindustan Times, December 19, 2003.

Boehje, Michael D., David A. Lins, "Risks and risk management in an industrialized agriculture", *Agriculture finance review*, vol 58 article #1

Brody, A., J. Copestake, M. Greeley, N. Kabeer and A. Simanowitz (2003), *Microfinance, poverty and social performance*, Institute of Development Studies, vol. 34, no. 4, October 2003, University of Sussex.

Brown, W., C. Green and G. Lindquist (2000), "A cautionary note for microfinance institutions and donors considering developing microinsurance products", Microenterprise Best Practices, USAID http://www.mip.org/pubs/mpb/cautionary_note.htm

Brown, W., "Prospects and perils of microinsurance: four questions MFIs should ask before developing a microinsurance product", USAID.

Brown, W. and Craig Churchill (1999), "Providing Insurance to low-income households. Part 1: Primer on Insurance Principles and Products", Calmeadow, UAID

How to Alleviate Poverty by Reducing the Impact of Hazard? The MicroInsurance Promise

Bryla, Erin (2003), “The use of price and weather risk management instruments”, Case Study for “An international conference on best practices: Paving the way forward for rural finance”, World Bank.

Buss, Terry (1999), “Microenterprise in International Perspective: An overview of the issues.” Journal of Economic Development, vol. 1 (1). <http://www.spaef.com/sample.html>

CGAP Donor Working Group on Microinsurance (2003), “Donor Guidelines for Funding Microinsurance”

CGAP (2000), “Microfinance and risk management: a client perspective”, Focus Note 17.

Citizens report on governance and development (2003), *Social Watch India*, National social watch coalition, New Delhi

Christen, R. P. (1997), “Banking Services For the Poor: Managing For Financial Success: An Expanded and Revised Guidebook For Development Finance Institutions”, Boston: Acción International.

Churchill, C.F. (1996), “An Introduction to Key Issues in Microfinance: Supervision and Regulation, Financing Sources, Expansion of Microfinance Institutions,” Microfinance Network, Washington, D.C.

Churchill, C.F. (2000), “Reaching the poor”, *The MicroBanking Bulletin*, Issue No. 5, Calmeadow publication

Cohen, M. and J. Sebstad (2003), “Reducing vulnerability: The demand for microinsurance”, Micro-Save Africa

Cohen, M. and J. Sebstad (2003), “How the poor respond to and protect themselves against risk events”, MicroInsurance Centre Briefing Note #2

Cohen, M. and J. Sebstad (2003), “Making microinsurance work for Clients”, MicroInsurance Centre Briefing Note #3.

Cohen, M. and M.J. McCord (2004), “Financial risk management tools for the poor”, MicroInsurance Centre Briefing Note #6.

Cohen, M. and J. Sebstad (2003), “Reducing vulnerability: The demand for microinsurance”, MicroSave-Africa.

CRISIL (2003), “Bhartiya Samruddhi Finance Limited (BSFL)”, MFI Grading, India

Deaton, Angus and Jean Drèze (2002), “Poverty and inequality in India: a re-examination”, Economic and Political Weekly, September 7, 2002, pp 3729-3748.

De Neufville, R. (2001), “Real options: Dealing with uncertainty in systems planning and design”, 5th International Conference on “Technology policy and innovation”, Technical University of Delft & Massachusetts Institute of Technology.

Department of disaster Management of Andhra Pradesh (2002), “A document on management of drought”, State of India.

Dorward, A., J. Kydd, J. Morrison and I. Uray (2003), “A Policy Agenda for Pro-Poor Agricultural Growth”, World Development Vol. 32, No 1, pp 73-89, Elsevier.

Drèze, J. and A. Sen (1989), “Hunger and Public Action”, Oxford Clarendon Press.

Drèze, J. (2001), “Starving the poor”, The Hindu, February 26, 2001, India.

Fischer, Thomas and M.S. Sriram (2003), “Self-Help Groups and Grameen Bank groups: What are the differences?”, in *Beyond micro-credit: putting development back into microfinance*, Vistaar publications, New Delhi

Galbraith, John Kenneth (1979), “The Nature of Mass poverty”, Paperback, USA.

Garson, José (1997), “Microfinance and anti-poverty strategies: a donor perspective”, United Nations Capital Development Fund, New York, 1 Jan 1997.

Ghatak, Maitreesh (1999), “Group lending, local information and peer selection”, Journal of Development Economics, vol. 60, no 1, pp 27-50.

Ghosh, J. (2004), “Income inequality in India”, People’s democracy, February 17, 2004, India

Gonzalez-Vega, Claudio (2003), “Deepening Rural Financial Markets: Macroeconomic, Policy and Political Dimensions”, paper for “Paving the Way Forward: An International Conference on Best Practices in Rural Finance”, Washington, D.C., 2-4 June 2003.

Gordon, Ann, Junior Davis and Andrew Long (2000), “The role of natural resources in the livelihoods of the urban poor”, Natural Resources Institute, University of Greenwich, UK.

Grosh, M. (1994), “Administering targeted social programs in Latin America: from platitudes to practice”, Washington DC, The World Bank.

Gudger, M. (1991), “Crop insurance: Failure of the Public Sector and the rise of the private sector alternative”, World Bank, Washington, DC.

Hazell, P.B.R. (1992), “The appropriate role of agricultural insurance in developing countries.”, Journal of international development 4, pp 567-581.

Hess, Ulrich, K. Richter, A. Stoppa (2003), “Weather Risk management for agriculture and agri-business in developing countries”, IFC, World Bank and Procom Agr, Roma

Hess, Ulrich (2003), “Innovative financial services for rural India”, Agriculture & Rural Development Working Paper 9, Agricultural and Rural Development Department, The World Bank

Hess, Ulrich (2003), *Comments on paper* “Risk management challenges in rural financial markets: Blending risk management innovations with rural finance” by J. Skees, Discussant

reaction paper for “An international conference on best practices: Paving the way forward for rural finance”, World Bank.

Hirsch, Martin and Jérôme Cordelier (2004), “Manifeste contre la pauvreté”, Emmaüs, *Oh editions*, France.

Hulme, D. and P. Mosley (1997), “Finance for the poor or poorest? Financial innovation, poverty and vulnerability”, in “Who needs credit? Poverty and Finance in Bangladesh”, The University Press Ltd. Dhaka.

Hulme, David and Andrew Shepherd (2003), “Conceptualizing chronic poverty”, World Development, Vol 31, No 3, March 2003, pp 403-423.

Ibarra, Hector (2003), *Comments on paper* “Risk management challenges in rural financial markets: Blending risk management innovations with rural finance” by J. Skees, Discussant reaction paper for “An international conference on best practices: Paving the way forward for rural finance”, Agroasemex.

International Labour Organization, “Woman in the informal sector and their access to microfinance”, <http://www.ilo.org>.

Irukwu, J.O. (1991), “Risk management in developing countries”, *Whiterby and Co*, London and Rolls Roys plc, UK

Johnson, Susan and Ben Rogaly (1997), “Microfinance and Poverty Reduction”, Oxfam, UK and Ireland.

Krishna Bhima Samruddhi Local Area Bank, KBSLAB (2003), “Report of directors”

Khandker, Shahidur R. (1998), “Fighting poverty with microcredit: Experience in Bangladesh”, Oxford University Press, Inc. New York.

Kimenyi, M, R Wieland, J.D. Von Pischke (1998), *Strategic issues in Microfinance*, Ashgate

Kim Kyung-Hwan (1995), “Access to Credit, Term of Housing Finance and Affordability of Housing”, *Housing Finance International*, vol. 9(4), June 22-27.

Lapierre, Dominique (1985), “La cité de la joie”, Editions Robert Laffont, Paris.

Littlefield Elizabeth, Johnathan Murduch, and Syed Hashemi (2003), “Is Microfinance an Effective Strategy to Reach the Millennium Development Goals?”, CGAP focus Note No. 24.

Luce, Edward (2004), “Rural India humbles Vajpayee”, *Financial Times*, May 14, 2004, UK.

Mahajan, Vijay, “Is microcredit the answer to poverty eradication?” BASIX, Hyderabad.

Mahajan, Vijay, “Sustainable rural livelihoods: the challenge of the decade” BASIX, Hyderabad.

Mahajan, Vijay, “A framework for building a sustainable rural financial system (RFS) for India.” BASIX, Hyderabad.

Mahajan, V. and B. Ramola (1996), “Financial services for the rural poor and women in India: Access and sustainability”, *Journal of International Development*, vol. 8, No.2, pp 211-224.

McCord, M.J. (2003), “The lure of microinsurance: Why MFIs should work with Insurers”, MicroInsurance Centre Briefing Note #1.

McCord, M.J., J. Isern, S. Hashemi (2001), “A case study of an example of full service model of microinsurance provision: SEWA”, The MicroInsurance Centre, MicroSave-Africa, Kenya.

McCord, M.J., Tamsin Wilson, P. Sagoe, P. Markowski (2003), “An exemple of systematic new product development for life microinsurance”, MicrInsurance Centre briefing note #4

McCord, M.J., S. Osinde (2004), “Lessons from health care financing programmes in East Africa”, MicrInsurance Centre briefing note #5

McGuire, Paul, John D. Conroy, “Fostering financial innovation for the poor: The policy and regulatory environment” Office of development studies, UNDP.

Montgomery, R. (1996), “Disciplining or protecting the poor?”, *Journal of International development*, vol. 8 (2), pp 289-305.

Morduch, J. (1995), “Income Smoothing and Consumption Smoothing,” *The Journal of Economic Perspectives*, Vol. 9, No. 3, pp. 103-1114.

Murdoch, J. (1999), “The Microfinance Promise”, *Journal of economic literature*, 37, pp1569-1614

Morduch, J., B. Haley (2002), “Analysis of the effects of Microfinance on Poverty Reduction”, NYU Wagner Working Paper, No. 1014

Morris, Saul S., Q. Wodon (2003), “The Allocation of Natural Disaster Relief Funds: Hurricane Mitch in Honduras”, *World Development*, Vol. 31, Issue 7, July 2003, pp1279-1289.

Mosley, P. (2001), “Insurance against poverty? The 'new generation' agricultural microinsurance schemes”, *Small Enterprise Development*, vol. 12, No. 1, pp 51-58

Mosley, P (2003), “Micro-insurance: scope, design and assessment of wider impacts”, IDS Bulletin, October 2003, vol.34, no.4, pp143-155, Institute for Development Studies.

Munkh-Orgil, Tsend (2003), *Comments on paper* “Risk management challenges in rural financial markets: Blending risk management innovations with rural finance” by J. Skees, Discussant reaction paper for “An international conference on best practices: Paving the way forward for rural finance”.

Okidegbe, N. (2001), “Rural Poverty: Trends and measurement”, Rural development strategy, background paper #3, the World Bank, Washington, D.C.

Parker, J. and D. Pearce (2001), “Microfinance, Grants, and Non-financial Responses to Poverty reduction: Where does microcredit fit?” Consultative Group focus Note No.20, Washington, DC. <http://nt1.ids.ac.uk/cgap/wnewlib.htm>

Prahalad, C.K., Stuart L. Hart (1999), “Strategies for the bottom of the pyramid: Creating sustainable development”, Draft, University of Michigan Business School, USA.

Rao, K.N. (2002), “Crop insurance in India – Past, present & Future”, *Vision*, July-December 2002, pp 29-39.

Robinson, Marguerite S. (2000), “Microfinance: The paradigm shift from credit delivery to sustainable financial intermediation”, chapter 4 in *Strategic Issues in microfinance*, edited by Kimneyi, Wieland and Von Pischke, Ashgate Press.

Rutherford, Stuart (1999), “The Poor and their Money: an essay about financial services for the poor people”, Institute for Development Policy and Management, New Delhi

Rutherford, Stuart (2003), “The second microfinance revolution: deposit taking”, Safesave.

Sadoulet, Loïc (2003), “Reputation as insurance? Extending the range of financial services for the poor”, ECARES, Free University of Brussels

Sainath, P. (2004), “Mass media vs mass reality”, *The Hindu*, May 14, 2004, India.

Sainath, P. (2003), “Nero’s guest”, a speech given at youth conference, MRA centre Panchgani, on 2nd June 2003.

Sainath, P. (1996), *Everybody loves a good draught*, Penguin, India

Sen, Abhijit (2000), “Estimates of Consumer Expenditure and Its Distribution: Statistical Priorities after NSS 55th Round”, *Economic and Political Weekly*, Dec. 16. 2000.

Sen, Biswajit (2003), “Understanding of poverty and empowerment of poor”, *Mainstream*, April 26 2003.

Shuvro Bakshi, Rajat (2002), “Strategies for Indian insurance companies – Post liberalisation”, *Vision: The journal of Business Perspective*, July-December 2002, pp 41-52.

Skees, J.R. (2003), “Risk management challenges in rural financial markets: Blending risk management innovations with rural finance”, Lead theme paper for “Paving the way forward for rural finance: An international conference on best practices”, 2-4 June 2003, GlobalAgRisk.

Skees, J.R. and B.J. Barnett (1999), “Conceptual and practical considerations for sharing catastrophic/systemic risks”, *Review of agricultural economics*, vol. 21, pp 424-441.

Skoufias, E. (2003), “Economic crises and natural disasters: Coping strategies and policy implications”, *World Development*, Vol. 31, No. 7, pp 1087-1102.

Srinivasan, R, M S Sriram (2003), “Microfinance: an introduction”, *Management review IIMB*, vol 15 no 2, June 2003, Bangalore

Sriram, M.S., Rajesh Upadhyayula (2002), “The transformation of microfinance in India: Experiences, Options and Future”, working paper No. 2002-12-01, Indian Institute of Management Ahmedabad, India.

Stiglitz, Joseph (1990), “Peer Monitoring and Credit Markets”, *The World Bank Economic Review*, vol. 4, no. 3, pp 351-366.

Suri, K.C. (2002), “Democratic process and electoral politics in Andhra Pradesh, India”, Working paper 180, Overseas development institute, London

Tangatz, “Poverty”, available on <http://www.TangaTZ.info>.

Thirtle, C., Lin Lin and J. Piesse (2003), “The impact of research-led agricultural productivity growth on poverty reduction in Africa, Asia and Latin America”, *World Development*, Vol. 31, No 12, pp1959-1975

Tiwari, P, S.M. Fahad, “Microfinance institutions in India”, Housing development finance corporation, Mumbai

Turvey, C.G. (2001), “weather derivatives for specific events risks in agriculture”, *Review of agricultural economics*, vol.23, pp333-51.

United Nations Conference on Trade and development (2002), “The least developed countries report 2002: escaping the poverty trap”, the UNCTAD Secretariat, New York.

United Nations General Assembly (2000), “United Nations Millennium Declaration”, 55th session, September 18, 2000.

United Nations General Assembly (2003), “Implementation of the UN Millennium Declaration”, Report of the Secretary-General

United Nations Development Program (2003), “Human Development Report 2003”, New York

van Oppen, Charles (2002), “The role of insurance in Disaster Reduction”, *Vision*, July – December 2002, pp 1-10.

Von Pischke, J.D. (2003), “The evolution of institutional Issues in Rural Finance: Outreach, risk management and sustainability”, Lead theme paper for “Paving the way forward for rural finance: An international conference on best practices”, Frontier Finance, 2-4 June 2003

World Bank (2004), “World Development Report 2004: Making services work for poor people”, Washington D.C.

World Bank, “Managing agricultural risk, vulnerability, and disaster”, Agriculture Investment Note, module 10

World Bank (2002), “Reaching the rural poor: a renewed strategy for rural development”, Washington D.C.

Wright, Graham A.N. (2000), *Microfinance Systems: Designing Quality Financial Services for the poor*, Zed Books Ltd. London & New York, and the University Press Limited, Dhaka.

BIBLIOGRAPHY: SECTION 3

Bansal A., Bhabo A. (1995), “A study of the Credit Rating Process”, Indian Institute of Management, Bangalore.

Bappaditya Mukhopadhyay (2002), “Efficiency of Competitive Rating Agencies”, Management Development Institute, Gurgaon, India.

Besley, Timothy (1995), “Non-Market Institutions for Credit and Risk-Sharing in Low Income Countries,” *Journal of Economic Perspectives*, Vol. 9, No. 3, pp. 115-127.

Bessis J., *Risk Management in Banking* (1998). John Wiley & Sons, Chichester.

Bodie Z., Kane A., Marcus A. (2002), *Investments*, 2nd edition, Tata-McGraw Hill, New Dehli.

Christen, R. P., Brigit Helms, and Richard Rosenberg (1999). “Format for Appraisal of Microfinance Institutions.”, CGAP Technical Tool, No. 4, Washington, D.C.

www.cgap.org/html/p_technical_guides04.html

Christen, R. P., (November 2001), “In Search of Credibility: Transparency and the Microfinance Industry”, *MicroBanking Bulletin*.

Consultative Group to Assist the Poorest CGAP, Rosenberg, R.(June 1999), “Measuring microcredit delinquency: Ratios can be harmful to your health”, *OccasionalPaper*, No. 3, Washington DC.

Consultative Group to Assist the Poorest CGAP/World Bank Group (2001), “Ressource Guide to microfinance assessments”, FocusNote 22, Washington DC

Consultative Group to Assist the Poorest CGAP/World Bank Group (September 2003), “Definitions of Selected Financial Terms, Ratios, and Adjustments for Microfinance”, Third edition, *Microfinance Consensus Guidelines*, Washington DC

Inter-American Development Bank IADB (1994). “Technical Guide for the Analysis of Microenterprise Finance Institutions”, Washington, D.C

Jeffery D Amato, Craig H Furfine (2003), “Are Credit ratings procyclical?”, Bank for International Settlements (BIS) Working Paper 129, Basel, Switzerland.

M-CRIL, Micro-Credit Ratings & Guarantees India Ltd. (2001), “The M-CRIL report, 2000. Performance of rated MFIs in Asia”, Gurgaon

M-CRIL, Micro-Credit Ratings & Guarantees India Ltd., (2001-2002), “Micro-Finance Rating-Risk assessment: Saathi”, Gurgaon

M-CRIL, Micro-Credit Ratings & Guarantees India Ltd., (2002), “Micro-Finance Capacity Assessment: Methodology”, Gurgaon

MicroRate, (2001), “MicroRate Report: Edpyme Confianza s.a.”, Washington D.C.

MicroRate, (2003), “MicroRate Brief Report: CMAC Tacna s.a.”, Washington D.C.

Moody’s Investors Service (2002), “Agricultural Cooperatives: Rating Methodology”, *Global credit research*, New York.

Planet Rating (September 2002), “GIRAFE Appraisal Rating Methodology”, Paris.

Planet Rating, (2003), “Report : PAMECAS, Senegal”, Paris.

Planet Rating (March 2003), “Capability Statement”, Paris.

Poon, W.P.H., M. Firth, and H-G. Fung (1999), “A Multivariate Analysis of the Determinants of Moody’s Bank Financial Strength Ratings,” *Journal of International Financial Markets, Institutions, and Money*, 9, pp.267-283

Pottier W.S., Sommer W.D. (1999), “Property-liability Insurer financial strength ratings: differences across rating agencies”, *The Journal of Risk and Insurance*, Vol. 66, No. 4, pp621-642

Schreiner, M. (1999), “A Framework For Measuring the Performance and Sustainability of Subsidised Development Finance Institutions”, Medina

Schreiner, M. (2002), “Credit scoring for microfinance: Can it work?”, *Journal of Microfinance*, Volume 2 Number 2, pp105-118.

Smith Roy C. and Walter Ingo, “Rating Agencies: Is There an Agency Issue?”, Stern School of Business, New York University. Draft of February 18, 2001.

Standard & Poor’s. “Rating Methodology: Evaluating the issuer”.

Von Pischke, J.D. (1996), “Measuring the Trade-off Between Outreach and Sustainability of Microenterprise Lenders”, *Journal of International Development*, Vol.8, No.2, pp. 225-239.

Von Stauffenberg, Damian, (2002), “Banking: Latin America’s Top MFIs”, *MicroEntreprise Americas*.

WEBSITES

www.worldbank.org
www.undp.org
www.cgap.org
www.microfinancegateway.org
www.microinsurancecentre.org
www.microinsuranceopportunities.org
www.ada.org
www.basixindia.org
www.microrate.com
www.planetrating.org
www.planetfinance.org
www.m-cril.com
www.ratingfund.org
www.id21.org

CONFERENCES

Jean-Philippe De Schrevel, Blue Orchard Finance, partner (March 9, 2004) “La Microfinance : Private banking perspective”, Degroof Bank, Brussels.

Prahalad, C.K., “Bottom of the pyramid”, speech November 2003 at the Indian Institute of Management Bangalore, VISTA event

Mahajan, Vijai, “Social entrepreneurship: a case study”, lecture, November 2003, Indian Institute of Management Bangalore, India.

Nikkil, “Social entrepreneurship: The people’s right to information, MKSS”, November 1 2003, Indian Institute of Management Bangalore, India

Planet Finance, “Présentation et réalisations”, January 2004, Free University of Brussels

APPENDIX

APPENDIX 1. Definition of poverty

The United Nations Development Program defines poverty along three different perspectives:

1. The income perspective: The insufficiency of income to provide appropriate access to life saving food and nutrition
2. The human poverty perspective: a general deficit in developing human capabilities resulting in an absence of skills and abilities to earn a livelihood free from hunger and deprivation.
3. The basic needs perspective: Insufficient food, shelter, water, sanitation, health care etc. to enjoy a decent life.

APPENDIX 2. Multidimensional approach of poverty

As we have seen poverty is multi-temporal. But it is also multi-dimensional. In the socio-cultural area, primary education is a necessity to break out of the poverty spiral although it is not a cure-all. Even where education does not result in higher income, it can result in improved childcare, greater self-confidence, wider social connections and better information leading to empowerment. Other dimensions are related to health: illness, poor nutrition (of women and children), time pressure on parents, access to safe water, and so on. Overpopulation, environment issues, juridical efficiency, discrimination of gender, ethnicity, class and caste, wrong assumptions (tourism, media etc), ignorance and the right to good information are other major socio-cultural drivers.

The Political environment must also be considered of major importance for mass and case poverty. Political systems, lack of democracy, war situations, corruption culture, citizens' participation, and freedom of speech, manipulation and hiding of information are all factors influencing poverty.

The 20th century has certainly been heavily influenced by politics. This has led to good (social security schemes, redistribution policies, regulation institutions etc) and bad consequences (world wars, genocides etc). The underdeveloped or developing countries were certainly given the worse of the consequences, and this for several dependent and independent reasons that we will not approach here. Civil wars, dictators, fake or non participatory democracies, general corruption, torture, huge lack of freedom and rights etc, are the common lot of many

of these countries. Even if there is a well-functioning electoral system, poor people may not be able to influence politicians about public services because they are not enough well informed. Moreover, these widely observed facts have too often been put in the shadow by the “developed” politics of the western world to respect some hazy standards of diplomacy applicable to regimes that do not respect them. Too often self-interests were part of these diplomacy games. Sometimes the question arises even whether it is naivety and ignorance or lack of courage that rules the international political system?

The lesson seems to be that the citizen-policymaker link is working well either when citizens can hold policymakers accountable for public services that benefits the poor or when the policymaker cares about the health and education of poor people (World Bank, 2004). These politics are called “pro-poor”.

In order to achieve this accountability link the best weapon to introduce for the poor is *better information*. Better information means better access to information that is more objective and of better quality. In consequence, not only the politics are mandated here but also the civil society of the better-off and the people in charge of the media or that could be in charge of them. In India for instance, the 2004 elections have shown a total failure of media to predict final results because of their disconnection with the normal Indians. This better information can then in turn reduce ignorance and enhance empowerment of the citizens, both necessary conditions to alleviate poverty. MKSS⁹⁶, an NGO based in Rajasthan, India, has fought for ten years to acquire the legal records of their representatives. The records were then made transparent in public hearings and published in details in local newspaper. They revealed that more than half of the Rajasthan representatives have a criminal past (multiple murders, rapes, thefts, corruption etc.) and part of them have never been judged⁹⁷. Thus, better information enables participation in the building of a political system that responds to the needs of the majority of the population and reduces of the corruption.

But *information is not enough*. People must be literate but must also have the legal, political and economic means to press demands against the government (WB, 2004). In Uttar Pradesh, a state of India, most citizens know that government services are dismal, and they know that everyone else knows that, and yet most do not feel free to complain. One villager⁹⁸ replied to the question why he did not complain, “*I could meet with an accident on the road. I could be put in the brick kiln oven. My bones could be broken.*”

⁹⁶ Mazdoor Kisan Shakti Sangathan, A non-party people’s organisation fighting for the right to information

⁹⁷ Information gathered through a conference and an interview with Nikil, the founder of MKSS

⁹⁸ Quoted by World Bank, *World Development Report 2004*

It is clear that more sources of empowerment are needed to allow the poor to transform their environment and to have an impact on the policymakers, even if they are informed.

Looking at the economical factors, housing of the poor is of major importance. Prof. Srinivasan, Dean of the Indian Institute of Management Bangalore⁹⁹, suggests that the house or the shelter is a very good measure of poverty. Other important factors are productivity, infrastructure and employment. Regulation and trade issues are of major importance for macro-economies and have significant impact on micro-economies. However, a UN report (UNCTAD, 2002) argues that it is naïve to expect that an economy where four out of five people live on less than \$1 a day will behave like a perfectly competitive market and that economic activities will automatically spring up if the government gets out of the way and allows the national market to interact with the rest of the world. Growing inequality in incomes and disparities are probably the worst drivers on the long term, although inequality is clearly an outcome. It leads to a polarisation of the developing countries where two different populations are growing apart while living side to side. Results can only be disastrous for both parties. Jean Drèze¹⁰⁰ points out:

"As the economy gives greater room to market forces, uncertainty and inequality often increase, possibly leading to enhanced economic insecurity amongst those who are not in position to benefit from the new opportunities, or whose livelihoods are threatened by the changes in the economy." (Jean Drèze, 2002)

Deaton and Drèze argue that overall improvement of living standards may hide instances of impoverishment among specific occupation groups. One of these groups may be the large majority of the rural poor. Inequality increases poverty and certainly its perverse effects. It is useless and even dangerous to reduce poverty by increasing wealth of the people who are already in the highest economical classes without increasing economic power of the poor at least with the same pace. It is thus obvious that ways have to be found to reduce inequality and uncertainty in order to foster economic security of the poor and political security for everybody.

APPENDIX 3. Fact Sheets on Poverty

⁹⁹ Statement made in an interview with the author, Professor in 'Corporate finance' and 'Social Entrepreneurship' and Administrator of M-CRIL, (October, 2003)

¹⁰⁰ Jean Drèze, a Belgian citizen, is Professor at the Centre for Development Economics at the Delhi School of Economics. He has co-authored a number of books with Nobel Laureate Amartya Sen and is a member of the support group of the Right to Food campaign, an informal network of organisations and individuals committed to the realisation of the right to food in India.

Fact sheet 1 : Microfinance and Poverty reduction¹⁰¹

Various studies, both quantitative and qualitative, document increases in income and assets and decreases in vulnerability of microfinance clients. Below are findings from some of the more reliable studies.

- Barbara MkNelly and Chris Dunford report that the incomes of two-thirds of CRECER (Bolivia) clients had increased after joining the program. Moreover clients reported "consumption smoothing" over the year as a result of diversifying income sources and purchasing food in bulk. Eighty-six percent of clients said their savings had increased; 78 percent did not have any savings prior to program participation.
- In another study of Freedom from Hunger clients in Ghana, MkNelly and Dunford found that clients had increased their incomes by \$36 compared to \$18 for non-clients. Clients had also significantly diversified their income sources. Eighty percent of clients had secondary sources of income versus 50 percent of non-clients.
- In Indonesia borrowers increased their incomes by 12.9 percent compared to increases of 3 percent in control group incomes. Another study on Bank Rakyat Indonesia borrowers on the island of Lombok in Indonesia reports that the average incomes of clients had increased by 112 percent and that 90 percent of households had moved out of poverty.
- A study of SHARE clients in India documented that three-fourths of clients who participated in the program for longer periods saw significant improvements in their economic well-being (based on sources of income, ownership of productive assets, housing conditions, and household dependency ratio) and that half of the clients graduated out of poverty. There was a marked shift in employment patterns of clients-from irregular, low-paid daily labour to diversified sources of earnings, increased employment of family members, and a strong reliance on small business. Over half of SHARE clients indicated that they had used their microenterprise profits to pay for major social events rather than go into debt to meet such obligations.
- In 1997-99, there was a downward trend in food expenditures in Zimbabwe. This was probably a cash-management strategy to cope with the rising cost of living. Participation in the Zambuko Trust, however, led to a positive impact on the consumption of high protein foods (meat, fish, chicken, and milk) for extremely poor client households.
- A detailed impact assessment study of BRAC in Bangladesh suggested that members who stayed in the program for more than four years increased household expenses by 28 percent and assets by 112 percent. Another analysis of household level data demonstrated that access to financial services enabled BRAC clients to reduce their vulnerability through smoothing consumption, building assets, and receiving services during natural disasters.
- A comprehensive study of microfinance conducted by the World Bank in the early 1990s on three of the largest programs in Bangladesh-Grameen Bank, BRAC, and RD-12-found that female clients increased household consumption by 18 takas for every 100 takas borrowed, and that 5 percent of clients graduated out of poverty each year by borrowing and participating in microfinance programs. More importantly households were able to sustain these gains over time. There were also spillover effects in the village economy. Average rural household incomes in program villages increased even for non-program households. One of the programs even influenced village wage rates. Increases in self-employment and subsequent withdrawals from informal labour pools led to a 21 percent increase in wages in the program villages.
- An important, earlier study of the Grameen Bank also found statistical evidence of economic welfare. The incomes of Grameen members were 43 percent higher than incomes of control groups in non-program villages and 28 percent higher than non-members in Grameen villages. Grameen members were also able to rely more on savings and their own funds to cope with crises rather than borrow from moneylenders. Wage rates in program villages increased as well.

Fact sheet 2: Microfinance and Education¹⁰²

There have been a few studies on microfinance and its impact on schooling.

- A longitudinal study in a BRAC area in Bangladesh found that basic competency in reading, writing, and arithmetic among children 11-14 years old in member households had increased from 12 percent of children at the start of the program in 1992 to 24 percent in 1995. In non-member households, only 14 percent of children could pass the education competency tests in 1995.
- Helen Todd's 1996 ethnographic study of a Grameen village points to the much higher levels of schooling of

¹⁰¹ Resumed from Littlefield Elizabeth, Johnathan Murdugh, and Syed Hashemi (2003), "Is Microfinance an Effective Strategy to Reach the Millennium Development Goals?", CGAP focus Note No. 24.

¹⁰² Resumed from Littlefield Elizabeth, Johnathan Murdugh, and Syed Hashemi (2003), "Is Microfinance an Effective Strategy to Reach the Millennium Development Goals?", CGAP focus Note No. 24.

Grameen children compared to children of non-members. Almost all of the girls in Grameen households had some schooling compared to 60 percent of girls in the comparison group; 81 percent of Grameen boys went to school compared to 54 percent in non-Grameen households. This is also substantiated in the World Bank study in 1998, which found higher levels of schooling for children of all credit program participants and statistically significant higher rates of schooling for girls in Grameen households.

- A Save the Children study on different microfinance programs report that in Honduras clients indicated that participating in the credit and savings program increased their earnings and the availability of resources. This allowed them to send many of their children to school and reduce student drop-out rates.
- An impact study of a microfinance program in Uganda, conducted for the USAID-AIMS project, showed that client households invest more in education than non-client households. Microenterprise revenues were important in financing the education of their children for over half of the client households. Clients also were significantly more likely than non-clients to pay school charges for a non-household member. This has implications for keeping orphans and the children of households affected by HIV/AIDS in school.
- The AIMS study of Zambuko Trust clients in Zimbabwe found positive impacts on enrolment ratios for boys 6-16 years old from 1997-99. Over the same period, school-enrolment ratios for girls 6-16 declined, who possibly dropped out of school in response to a need to care for the sick. The data for repeat borrowers suggested that cumulative loans increase the likelihood that clients' children aged 6-21 would stay in school.
- School enrolment among working-class children in Ahmedabad was 55 percent for girls and 65 percent for boys 11-17 years of age in 1997. Over the period 1997-99, borrowing from SEWA Bank had a positive impact on boys' secondary-school enrolment rates, which rose to 70 percent. However, the relationship of SEWA participation to the enrolment of girls at the secondary-school level or of girls and boys at the primary-school level was weak.

Fact sheet 3: Microfinance and Health¹⁰³

The specific evidence on health outcomes for women and children in program households, though sparse, does point to a strong positive impact.

- CRECER in Bolivia provides basic health education along with financial services. An impact study shows that clients had better breast-feeding practices, were more likely to give rehydration therapy to children with diarrhea, and had higher rates of DPT immunization for their children.
- A similar study in Ghana found that Freedom from Hunger clients had better breast-feeding practices, and their one-year-old children were healthier than non-client children in terms of weight-for-age and height-for-age. Clients also showed significant positive changes in a number of health practices-breast-feeding immediately after birth (so newborns get colostrum), introducing liquids and first foods to infants, and giving rehydration therapy to children with diarrhea.
- A study, commissioned by USAID-AIMS, reported that clients in the FOCCAS microfinance program in Uganda, who received health care instructions on breastfeeding, preventive health, and family planning, had much better health care practices than non-clients. Ninety-five percent of clients engaged in some improved health and nutrition practices for their children compared to 72 percent of non-clients. Thirty-two percent of clients had tried at least one AIDS-prevention practice compared to 18 percent for non-clients.
- A comprehensive longitudinal study of BRAC clients found that fewer members suffered from severe malnutrition (relative to the control group), and more importantly the extent of severe malnutrition declined as the length of membership increased.
- In Bangladesh a World Bank study showed that a 10 percent increase in credit to women was associated with a 6.3-percent increase in mid-arm circumference of daughters. Mid-arm circumference of sons also increased, though by a smaller amount. There was also a statistically significant positive effect on height-for-age for both boys and girls.
- Another survey of microfinance clients in Bangladesh indicated that rates of contraceptive use were significantly higher for Grameen clients (59 percent) than for non-clients (43 percent). Similar findings of increased contraceptive use were reported in a later study by Mizanur Rahman and Julie DaVanzo. This is generally due to greater awareness of contraceptive programs gained by attending group meetings and from increased mobility that allows women to seek out such services.

¹⁰³ Resumed from Littlefield Elizabeth, Johnathan Murdoch, and Syed Hashemi (2003), "Is Microfinance an Effective Strategy to Reach the Millennium Development Goals?", CGAP focus Note No. 24.

Fact sheet 4: Microfinance and Women Empowerment¹⁰⁴

- Microfinance programs from different regions report increasing decision-making roles of women clients. The Women's Empowerment Program in Nepal found that 68 percent of its members were making decisions on buying and selling property, sending their daughters to school, negotiating their children's marriages, and planning their family. These decisions traditionally were made by husbands. World Education, which combines education with financial services, found that women were in a stronger position to ensure female children had equal access to food, schooling, and medical care. TSPI in the Philippines reported that program participation increased the percentage of women who were principal household-fund managers from 33 percent to 51 percent. In the control group, only 31 percent of women were principal fund managers.
- Results of the Freedom from Hunger studies in Bolivia and Ghana indicate that program participation led to increased self-confidence in women and improved status within the community. Participants in Ghana played a more active role in community life and community ceremonies, while participants in Bolivia were actively involved in local governments. repris
- A survey of 1300 clients and non-clients in Bangladesh showed that credit-program participants were significantly more empowered than non-clients on the basis of their physical mobility, ownership and control of productive assets, (including homestead land, involvement in decision making, and political and legal awareness. This empowerment increased with duration of membership, suggesting strong program influence. The study also found, in some cases, that program participation led to an increase in domestic violence. However, over time, men and families became more accepting of women's participation, which eventually led to a decrease in violence.
- In her study, Naila Kabeer finds that in microfinance programs changes occurred at a personal level in the form of increased self-worth. At the level of the household, she finds that women's increased contribution of resources led, in a great majority of cases, to declining levels of tension and violence. Women often reported feeling an increase in affection and consideration within the household with longer program membership.
- Political empowerment of microfinance clients, in terms of participation in political mobilization or running for political office, is not well documented. However, there are many instances of such occurrences. Women clients of Opportunity Microfinance Bank in the Philippines have been elected to the local government. CRECER in Bolivia, CSD in Nepal, Grameen and BRAC in Bangladesh, and World Education, all report clients running for local government office and being elected. FORA in Russia organized a campaign for democracy in the Russian elections. Members of both SEWA and the Working Women's Forum in India have organized to get better wages and better rights for informal women workers, to resolve neighbourhood issues, and to advocate for legal changes.

APPENDIX 4. Ratios: Allies or Enemies¹⁰⁵?

The ratios are dangerous if the reader gets a number but **no information** about the measuring rod being used. MFIs use dozens of ratios to measure delinquency. Depending on which of them is being used, a "98 percent recovery rate" could describe a safe portfolio or one on the brink of meltdown. Unless we know exactly what goes into the numerator and the denominator, delinquency ratios are more likely to obscure the real situation than to illuminate it. MFIs should thus use a much tighter definition of delinquency than traditional commercial banks because their loans tend to be shorter term, their payment more frequent, their delinquency more volatile and their collateral much smaller or nonexistent.

Note that election of a particular ratio is often driven by the availability of information: the MFI has to settle for a less-than-ideal version of an indicator because its systems cannot produce the information needed for the ideal indicator it would have preferred.

The ratios that are the most subject to miscalculation, misinterpretation or misuse are:

- **Collection rates (3.e)**

¹⁰⁴ Resumed from Littlefield Elizabeth, Johnathan Murdoch, and Syed Hashemi (2003), "Is Microfinance an Effective Strategy to Reach the Millennium Development Goals?", CGAP focus Note No. 24.

¹⁰⁵ Adapted from CGAP Occasional Paper No. 3

The assumption that this rate is the complement of the loan loss rate or delinquency rate (percentage of the lender's loan portfolio that is irrecoverably lost during one year) is almost always wrong, and sometimes fatally so! An MFI that maintains a consistent 95 percent collection rate may think it is losing only 5 percent of its portfolio each year to default. It is not, because¹⁰⁶:

- The collection rate (CR) is relative to every *loan cycle*. In one year there will be several loan cycles, especially for MFIs that use short loan cycles. Assume a three-month loan cycle. For every cycle, 5 percent of the disbursed amount will not be recovered. This is 20 percent on a year basis...
- BUT the loans that are active at any point in time have an *original amount disbursed* that is different of the amount of portfolio outstanding. The average outstanding portfolio¹⁰⁷ represents the actual quantity of funds committed to the lending operation; it is this amount, not the amount disbursed, that the MFI really owns and really has to finance. Since this amount is smaller, the annual loss rate will be higher than 20 percent and obviously much higher than 5 percent.

The CGAP constructed a simple formula to calculate the annual loss rate (ALR) of an MFI:

$$ALR = \frac{1 - CR}{T} \times 2 \quad \text{and } T \text{ is the loan term expressed in years.}$$

- Arrears rate (3.f)

They tend to create an overoptimistic opinion of the portfolio quality:

- Overdue payments are not compared with payment due but with total loan amounts. The rate will be small because the amounts that have been fallen due are much smaller than the total loan amounts. If it is the only delinquency rate that is used by the MFI problems can go unnoticed for a long time before it is too late.
- When a client misses a payment the arrears rate captures the increased risk that this payment will never be collected. But the rate fails to capture the much larger increased risk that the MFI will lose the outstanding balance.

- Portfolio At Risk rates

Here nominator and denominator are from the same origin, outstanding balances. The nominator captured the entire increased risk due to delinquency.

According to Richard Rosenberg, rather than tracking just one PAR indicator, MFIs should *age* their portfolios: that is, they should break them into groups by degree of lateness (i.e. 10, 30, 60, 90, 180 days).

This measure discriminates between loans where a payment is just barely late and much riskier loans that have been overdue a long time. It gives proper relative weight to small and large loans, short- and long-term loans. Managers who receive a daily or weekly aged PAR report can quickly pick out loans that need to be pursued aggressively, while keeping a finger on the pulse of overall portfolio quality.

¹⁰⁶ Rosenberg, R. and The Consultative Group to Assist the Poorest CGAP (June 1999), "Measuring microcredit delinquency: Ratios can be harmful to your health", *OccasionalPaper*, No. 3.

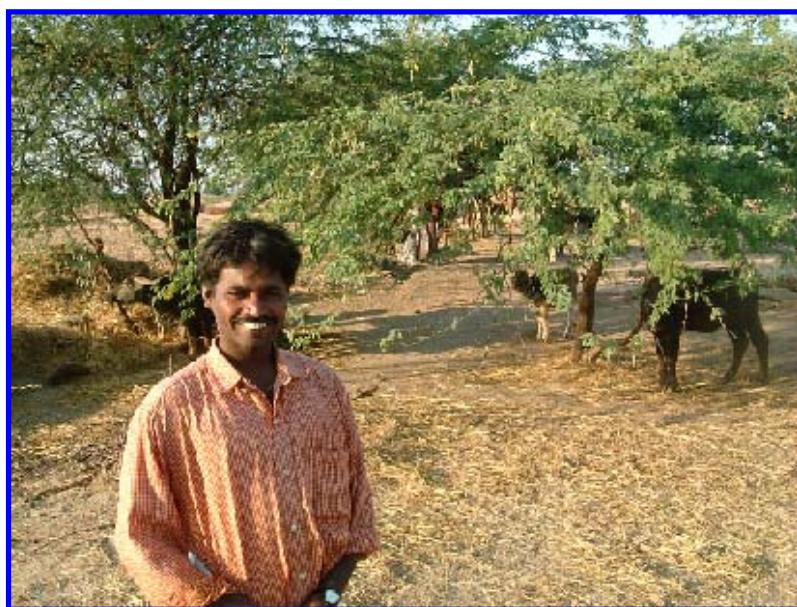
¹⁰⁷ Average outstanding balance=(original principal + amount of principal in one payment)/2

An aged PAR is considered as the single most useful indicator. However it bears still some disadvantages:

- It is dependant on accounting policy. When a loan is finally written off because the probability of Recovery has become very low, the loan balance disappears from both the numerator and the denominator of the PAR fraction, lowering the value of the fraction. Thus failure to write off loans will inflate the PAR. A MFI can be unwilling to write-off since it involves on on-time loss on the income statement. But by adopting an aggressive written-off policy a MFI can lower the PAR at the wished level in order to please a board that would be more focussed on delinquency than profitability.
- PAR denominator should include only loans on which at least one payment is fallen due, so that late loans in the nominator are compared to the outstanding balance of loans that have a chance to default.
- The PAR measure works only for the loans that are repaid in instalments. If the first payment is also the last one, the loan doesn't appear in the PAR rate. For these the collection rate would be more appropriate.

To answer the question “Ratios: Allies or enemies?”, we can conclude that ratios are powerful allies for evaluation if the complexity of their composition and context is well understood, thoroughly known and disclosed. Otherwise they could be misleading and fatal for all the stakeholders.

A hopeful microinsurance KBS client
(Kalupally, Mahabubnagar)



“Without uncertainty, love, which always entails risks as well as the joy of discovery, loses its sharp edge.” J. Drèze (1987)