MICROFINANCE:

FINANCIAL SERVICES FOR THE POOR

Siddharth Parameswaran (FIAA, ASIA)

Nicholas Raper

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MICROFINANCE: FINANCIAL SERVICES FOR THE POOR

Microfinance is an economic development approach that involves providing financial services through institutions to low-income clients, where the market fails to provide appropriate services. The range of products provided by the microfinance institutions (MFIs) includes credit, savings and insurance services. In many cases, the microfinance institution might provide social intermediation services as well, such as training and education, in line with their development objectives.

The rationale behind the establishment of microfinance schemes is that access to financial services is a key component of empowering the poor. Improved access to and efficient provision of savings, credit and insurance services can enable the poor to smooth their consumption, manage their risks and invest in themselves in order to improve their quality of living. A lack of access to adequate financial services is one contributor to a lack of development opportunities and a cause of hardship for the very poor.

What this paper covers

This paper has three goals:

- First and foremost, to explain to actuaries what microfinance is;

- Secondly, to explain what are some of the important (and unique) issues facing microfinance institutions in doing their work; and

- Thirdly, highlight areas where actuarial skills may be used.

In the authors' views, there is scope for actuaries to use their financial management skills, and their knowledge of financial products in this field. Microfinance providers face a dearth of financial skills in their staff. This need must be tempered with the reality that the non-profit nature of most of the programmes, and lack of data make it difficult for the schemes to employ and make use of financial professionals adequately.

Having explained what this paper aims to cover, it is also worthwhile spelling out some of the important issues in microfinance that we do NOT cover.

Firstly, the discussion on microfinance is limited to its provision in third world countries. Similar schemes are being tried to aid disadvantaged communities in the developed world as well. Many of the issues faced by those schemes are sufficiently different to the developing world to require a separate discussion.

Secondly, it is not in the scope of this paper to discuss the extent to which microfinance reduces poverty when compared against other needs like health and education. Suffice to say, the need for microfinance has to be considered against these other competing needs of the poor. There seems nevertheless to be agreement amongst development agencies that in many contexts, it can be a very useful tool to aid the poor.

Thirdly, this paper does not provide discussion on what is needed to have a "successful" scheme. It discusses important trade-offs to consider, rather than providing definitive solutions. Neither of the authors have a background of working with microfinance institutions, and hence do not feel comfortable providing advice or judgements on policy.

Section 1: What is Microfinance?

1.1. Definition:

Microfinance is an *economic development approach* that involves providing *financial services* through *institutions* to *low-income clients*, where the market fails to provide appropriate services. It involves providing the poor with access to savings, insurance and credit services. This will enable them to smooth their consumption, manage their risks better and invest in themselves in order to improve their quality of living.

1.2. Brief History:

1.2.1. Microfinance products are variations on financial services products that have been in existence for many years.. Access to some form of financial services, usually on an informal basis have been around in the developing world for a very long time. For example, there were the credit and savings groups such as the "tontines" in Africa, and the "tandas" and "pasanaku" in Central and Southern America. These funds were community based structures supporting and providing limited services to the people of the tribe.

1.2.2. Access to financial services *institutions* is much more recent. Institutions bring scale, and more rigour into the provision of financial services. Such institutions have been around in Europe from at least as far back as the 15^{th} Century (e.g. the Medici family of Florence). Banking however grew most rapidly during the times of the industrial and agricultural revolution from the 1700s onwards. Banks provided credit services to the richer / more credit worthy segments of society.

1.2.3. Financial services that targeted the poor exclusively did not emerge in Europe until the early 1700s when Jonathan Swift started the Irish Loan Fund system. Here, funds were provided as small loans to farmers and other rural clients who lacked the capacity to borrow money through more traditional means, and often required working capital to conduct business efficiently. These funds proved very popular amongst the rural clientele and by the 1800s there were about 300 funds throughout Ireland providing similar services. From this, various other types of institutions targeting the poor also sprang up (e.g. friendly societies).

1.2.4. In the developing world, institutional financial services for the poor can be traced back to state credit co-operatives that were set up between the 1950s and 1970s. These schemes were set up in many countries to assist particular industries (most often agriculture). They involved providing training, coupled with cheap credit. Some of these schemes however suffered due to low repayment rates and corruption.

1.2.5. As a response to this problem, and due to a need to provide financial services beyond purely the agricultural sector, the microfinance industry arose in force in the 1980s. Non-government organisations (NGOs) primarily established credit schemes to provide finance to various sectors. They often provided these services as part of a strategy to achieve broader goals, such as empowerment of women. Donor organisations were an important part of the microfinance scene by providing the seed capital that has allowed the provision of loans, often with subsidies to offset defaulting on loans by recipients of the services.

1.2.6. There are now many participants in the microfinance scene. These include NGOs, development agencies, governments and even private companies. The growth over the last few decades has in fact seen the emergence of many larger microfinance institutions. Institutions such as the Grameen Bank in Bangladesh have started to provide credit on a large scale to poorer clients who are unable to access traditional financial services. There has been a trend in the last decade towards MFIs trying to achieve financial sustainability, rather than just relying on donor funds for subsidies

Box 1.1- Microfinance Institution: Grameen Bank

The Grameen Bank in Bangladesh is probably the best known microfinance institution. It serves the poor in Bangladesh by encouraging them to borrow and save in a financially responsible manner. The origin of Grameen Bank can be traced back to 1976 when Professor Muhammad Yunus, Head of the Rural Economics Program at the University of Chittagong, launched a research project to examine the possibility of designing a credit delivery system to provide banking services for the rural poor. Since its small beginnings, the bank has distributed almost $US3bn of loans and has an outstanding loan portfolio of $US218.19m at Dec 2002.

Box 1.2- Microfinance Institution: Bank Rakyat Indonesia

The Bank Rakyat Indonesia(BRI) is one of the largest microfinance institutions. It is one of the few MFIs that is financially self-sufficient, and with substantial outreach across Indonesia. In Oct 2002 BRI had 30 million customers across the whole of Indonesia. The value of the outstanding loan portfolio was $US1.319bn. BRI holds over $US2.5bn of savings from 28million poor and rural customers.

Microfinance provided in a sustainable way is now seen by both the World Bank and the Asian Development Bank as one important tool for poverty alleviation around the world.

1.3. Products and services provided by Microfinance Institutions

1.3.1. *Types of services:* As MFIs are set up with the aim of poverty alleviation in mind, they often provide more than just financial services. The three main types of services provided are:

1.3.1.1. *Financial Intermediation:* This is the main service offering of MFIs (and the focus of this paper). It can include providing working capital, fixed asset loans, savings and insurance products.

1.3.1.2. *Enterprise Development Services:* As a complementary service, some MFIs offer a basic level of training to encourage successful microenterprises. This can ensure a better success rate in the impact of the credit provided. This may involve training on marketing and business management etc.

1.3.1.3. *Social Services:* Where social services are very poor in an area, it can be difficult to provide financial services that people will be able to use. The people may be living hand-to-mouth, without any basic social services being provided. It can be very difficult for people under such circumstances to engage in sustainable entrepreneurial activities. Basic social services that could be provided by MFIs, before provision of financial services can include assistance with health and education. Such services obviously require substantial donor funds to operate. They are however far more important than financial services to people that face such poverty.

1.3.2. *Financial Intermediation:* We will mainly examine the financial services provided by MFIs, as it is in these areas that actuaries might be able to provide most assistance. Financial Intermediation involves transferring capital, liquidity or risk from those parts of the economy that have a surplus, to those that have a shortage. MFIs are often not in a position to provide a full suite of financial services. The products they do offer depend on their objectives, and the needs of their target market. In principle, they are very similar to those offered by large financial institutions, but usually with an emphasis on simplicity. Some of the products provided by MFIs include:

1.3.2.1. *Credit:* Loans are usually provided for investment in a productive pursuit (as opposed to being used for consumption). There are times (e.g. during a drought that causes a lack of production), where the loans may be provided for consumption as well, although if used too widely, it may result in a high rate of default. Credit is usually provided on a short-term basis (anywhere between 3 months and one year), generally for small loan sizes. Assessing credit risk is difficult, and not cost effective for small loan sizes. The method used by most MFIs is to lend small amounts to individual customers at first. If they make timely repayments, they will increase they amounts they lend in the future. Some MFIs try to ensure repayment by forming Joint Liability Groups. These involve members of a community agreeing to guarantee each other's loans. This way, peer pressure and community conscience can result in a high rate of repayment on loans. MFIs are forced to run very cheap operations (e.g. few branches, a mobile staff force with low salary expectations). Loan interest rates are usually higher than commercial banks, due to the higher default risk and higher expense ratios faced.

1.3.2.2. *Savings:* Deposit taking services can be very valuable to the poor, who often have very few reliable places to save money in order to smooth timing differences between their income and expenditure. From the MFI's point of view, it can be a useful source of funds, and can encourage financial prudence in their clients. The risk in providing these services are similar to those faced by any bank. If the MFI's loan repayment rate in particular is poor, there is a great risk that depositor's capital will be eroded. Generally, deposit taking institutions would be required to face much more regulation than those providing just loan services. It can be disastrous for confidence in the financial system if the poor lose their savings due to insolvency of the MFI.

1.3.2.3. *Insurance:* MFIs in some countries are trying to expand their product range to include risk transfer services. The Grameen Bank in Bangladesh for example requires each member in a group lending programme to contribute 1 percent of the loan amount to an insurance fund to cover the risk of death mitigating their ability to repay the loan. Other types of insurance offered include health and property. This is a risky product to offer for many MFIs, as they often lack the expertise to price or control the risk they take on- did somebody call for an actuary? It is also questionable whether insurance is of as much value to the very poor, as the cost to transfer the risk may be too high for them. Some institutions[1] that have provided insurance say that clients get benefits from protection against extreme hardship caused by death or catastrophe. Such disasters often hurt the poor more than the rich.

Box 1.3- Microfinance Products: Grameen Bank

The Grameen Bank has developed a framework for loans that attempts to encourage responsible financial practices amongst their clients. This is achieved by requiring all loan recipients to have partaken in a regular savings plan prior to receiving a loan, and through the continued education of their clients. The Grameen Bank originally focused on providing its services to women, but has expanded its services to other disadvantaged groups in society, and now provides both credit and deposit facilities to a large number of people throughout the country.

[1] "Health Insurance Services for Rural Households in Cambodia, Activity Report of Two Years of Experimentation" Christine Poursat, Pascale Le Roy: GRET 2001

Box 1.4- Microfinance Products: Bank Rakyat Indonesia

Bank Rakyat Indonesia's "Kuepedes" credit facility for small businesses is one of the best known microfinance products worldwide. There are two different types of "Kuepedes" loans, a 'Working Capital' loan and a 'fixed asset' loan, each of which have slightly different terms and conditions, reflecting different demands and risks. The "Kuepedes" products are explicitly not available as a source of venture capital and are targeted towards micro businesses to help improve operating efficiency and promote economic growth among the poorer and rural clients.

Working Capital Loan Product	*Fixed Asset Loan Product*
Term: 24 Months	Term: 36 Months
Minimum loan: Rp 25,000 (~$US3)	Minimum loan: Rp 25,000 (~$US3)
Maximum loan: Rp 50,000,000 (~$US5,000)	Maximum loan: Rp 50,000,000 (~$US5,000)
Repayments: 1, 3, 4 or 6 monthly	Repayments: 1, 3, 4 or 6 monthly
Prompt repayment incentives	Prompt repayment incentives

Maximum combined outstanding loan balance if two loans are held is Rp 55,000,000.

1.4. Whom services are provided to

1.4.1. Clients of MFIs include self employed, low income entrepreneurs in both urban and rural areas. E.g. street vendors, small farmers, service providers (rickshaw drivers, hairdressers) and artisans.

1.5. Size of market

1.5.1. Official statistics on the size and scale of microfinance programs across the world are extremely hard to find, and often unreliable.

1.5.2. *The Number of MFIs and customers:*

A survey conducted in 1999 by the *International Food Policy Research Institute* (IFPRI) estimated that 54 million customers in Asia, Latin America and Africa were serviced by MFIs, with outstanding loans of US$18bn and US$13bn in savings. A similar survey conducted earlier in 1995 by the *Sustainable Banking with the Poor Project* indicated that MFIs reached only 13 million customers, with outstanding loans of US$7bn. This shows that there has been a rapid increase in the reach of MFIs in quite a short space of time. It must be noted however that looking at these statistics, it is very hard to incorporate the large number of small savings and credit groups that exist in Asia, Africa and South America. Perhaps some of the increase can be explained by the greater reach of the second survey.

1.5.3. Nevertheless, it is clear from available statistics that MFIs are highly concentrated in size, with the IFPRI survey showing that 80% of the customers are reached by just 3% of the MFIs. The United Nations Capital Development Fund (UNCDF) estimates however that there are more than 10,000 microfinance organisations operating in more than 42 countries across the world!

1.5.4. *Breadth of activities and size of loans:*

Given the lack of comprehensive statistics on all the MFI operations around, we have focused on the best source of information we could get on loan sizes by region. Box 1.5 and 1.6 below demonstrate the break up of the USAID (the United States's government foreign aid body's) microfinance portfolio. USAID directly funds many microfinance institutions around the world. It can be seen that the majority of the operations are being carried out in Asia and Latin America. This is likely to be typical of the entire industry in general, as these are the continents where the programmes have had the most history of success. The large number of loans issued, and clients served in Africa, is larger than we would expect for the industry as a whole. African microfinance schemes have more of a chequered history, with some schemes suffering low repayment rates, and some facing difficulty in breaching the cultural sensitivities of providing loans to women. As can be seen from the tables, the average amounts outstanding are not very large, with the average loan balance in Africa and Asia being under US$200. Box 1.7 shows the Grameen bank's average loan size.

Box 1.5- USAID Loan Recipients

	Clients ('000s)	Clients (% of Total)	Average Loan ($US)	Female Clients (%)
Africa	315.3	14.6	193	72
Asia	625.5	28.9	179	87
Near East	88.7	4.1	498	27
Europe/Eurasia	148.5	6.9	432	54
Latin America/Caribbean	986.4	45.6	595	65
Total	2164.4	100.0	401	70

Source: U.S.Agency for International Development Microenterprise Results Reporting for 2000

Box 1.6- USAID Savings Clients

	Clients ('000s)	Average Savings Account ($US)
Africa	952.7	193
Asia	792.8	179
Near East	3.2	498
Europe/Eurasia	147.9	432
Latin America/Caribbean	1258.5	595
Total	3155.1	401

Source: U.S.Agency for International Development Microenterprise Results Reporting for 2000

Box 1.7- Microfinance Loans: Grameen Bank

According to its website, Grameen Bank's average outstanding loan was around US$110 in 2001 (15971m Bangladeshi Takas to 2.5m borrowers, exchange rate to $US of 60).

1.5.5. Needs for finance that are currently being met: It is perceived by most people involved in development activities in the third world, that the financial services industry fails to provide services equal to those demanded by the world's poor. Robinson in her book *Microfinance Revolution, 2001*, estimates that there are approximately 1.8bn *economically active poor* in the world. This is considered the target audience for microfinance institutions. The economically active poor refers to the low to low-middle income earners that have some form of employment, and hence income, and are not malnourished or severely food deficient. They are the people that are capable of generating income to establish self sufficiency and economic growth but for reasons beyond their control lack access to financial services to assist them in their endeavours. The number of economically active poor and the demand for microfinance services can be extensively debated, but all sides concur that they are substantial.

Section 2: What are some of the unique challenges faced by microfinance institutions?

2.1. Understanding the country's financial landscape:

In providing microfinance it is important for MFIs to understand the financial landscape of the country they are in, both from the users' perspectives and the providers' perspectives. The landscape in a particular country can greatly affect the strategy, and ability of MFIs in reducing poverty. This section addresses some of the important issues for MFIs to consider.

2.1.1. *Who are the existing financial services providers and what needs are they meeting?*

2.1.1.1. In developing countries, there can be very varied providers of financial services. Providers can include formal profit based institutions, such as private banks / insurance companies, state based financial intermediaries (which may have less straight forward profit objectives), credit co-operatives, MFIs and informal lending sources (such as family, or local money lender). Each of the providers are operating in different environments with varying client needs, profit aims, and degrees of regulation protecting customers.

2.1.1.2. The types of products on offer can vary as well. For example, they may provide deposit taking services, credit services, investment vehicles and/or insurance. Before understanding what financial services needs are best met through a microfinance scheme, it is important to understand what needs are already being met. Obviously, not all the participants would service all markets with all products.

Box 2.1- Possible Financial Service Providers (reproduced from ***Microfinance Handbook, 1999***)

Formal sector	*Semiformal sector*	*Informal sector*
Central bank	Cooperatives	Savings associations
Banks	Savings and credit cooperatives	Combined savings and credit associations
Commercial banks	Multipurpose cooperatives	Rotating savings and credit associations and variants
Merchant banks	Credit unions	Informal financial firms
Savings banks	*Banques populaires*	Indigenous bankers
Rural banks	Cooperative quasi-banks	Finance companies
Postal savings banks	Employee savings funds	Investment companies
Labor banks	Village banks	Nonregistered self-help groups
Cooperative banks	Development projects	Individual moneylenders
Development banks	Registered self-help groups and savings clubs	Commercial
State-owned	Nongovernmental organizations (NGOs)	Noncommercial (friends, neighbors, relatives)
Private		Traders and shopkeepers
Other nonbank institutions		NGOs
Finance companies		
Term-lending institutions		
Building societies and credit unions		
Contractual savings institutions		
Pension funds		
Insurance companies		
Markets		
Stocks		
Bonds		

2.1.1.3. The extent to which informal financial services are provided are difficult to assess. They can involve providing loans or deposit services to households in a village, often without formal collateral. As the lender and the borrower usually know each other, social sanctions within the community substitute for legal enforcement.

2.1.1.4. In rural areas, where there may be less provision of financial services, it is quite common not to see the presence of for-profit financial institutions.

2.1.1.5. Government provision of financial services can have both good and bad consequences. Experience in some developing countries is that if they operate inappropriately[2], they can severely distort the operation of the financial services sector. The World Bank identifies that one of the most detrimental circumstances for the sustainable provision of finance to the poor is when state banks undertake wholesale debt forgiveness. This can lead to a view amongst borrowers from all providers that they are better off not repaying loans, and instead waiting for the loans to be written off.

Box 2.2- Microfinance and Corruption

According to the World Bank, , there is also little point for banks to provide subsidized loans. It can lead to inefficient allocation of loans, and can result in lower loan volumes than would otherwise be the case. The World Bank suggests that within a certain range, poor clients are not very interest sensitive for loan services, and hence are not as needing of interest subsidies as might be expected. The World Bank also warns that subsidies can encourage corruption which can lead to an inefficient allocation of the subsidized loans. This is because the more influential people in a community can crowd out access to the very poor.
A case in point is the government operated rural credit schemes in India. India's Agricultural Credit Review Committee reported in 1989 that during the election years, and even at other times, there was considerable propaganda from political platforms for postponement of loan recovery or pressure on the credit institutions to grant extensions to avoid or delay the enforcement process of recovery. In the course of field visits, it was often reported that political factors were responsible for widespread defaults on the ostensible plea of rural crop failures. The "willful" defaulters were often politically important people whom the credit agencies' bureaucracy was reluctant to touch. Their practices were often copied by the whole population in an area. Banners were sometime put up in villages declaring that no bank officer should enter the village for loan recovery purposes. The general climate, therefore became increasingly hostile for recoveries, and made it difficult for the provision of further loans.

Source: Yaron, Benjamin, and Piprek, 1997

2.1.1.6. Government participation in financial services has of course been successful in poverty reduction in some countries, especially where advantage has been taken of the wide reach of governments. The loans can also be part of a broader policy of development, which can include education that could enhance the usefulness of access to finance. The MFI must be aware of the extent, nature and aims of government involvement in the financial sector.

2.1.1.7. Understanding a country's financial system can allow potential MFIs to identify areas in which services or products are inadequate. It can also help them understand if partnerships with existing providers may be an effective way of achieving their objectives.

2.1.2. *Who are the potential clients?*

2.1.2.1. In providing a microfinance programme, it is important for MFIs to have a clear focus on what market they are targeting (and why that market fits in with their overall objective). Experience shows that well targeted schemes are much more likely to succeed than trying to provide all products to all the poor in a country. Many MFIs restrict themselves to clients that meet a particular poverty level, gender, ethnic group, caste or region etc. This allows them to concentrate their resources in better understanding that target market.

[2] Microfinance handbook

2.1.2.2. It is important for MFIs to understand the extent of poverty in the country they are operating in. This will aid in assessing the potential size of the market, and in designing products and policies that are appropriate for the country. Understanding this issue will help in better poverty reduction outcomes.

2.1.3. *How do existing financial sector policies affect the provision of financial services, including interest rate policies, government mandates for sectoral credit allocation, and legal enforcement policies?*

2.1.3.1. Interest rates set by MFIs for their loans and for their savings products need to take into account the rates of return on government debt (if anyone is willing to buy it at commercial rates), as well as the rates of return in the mainstream finance sector (as these are reflective of the opportunity cost of using the funds).

2.1.3.2. In some countries there may be interest rate restrictions (which provide a ceiling on lending rates, in order to restrict profiteering). This can cause problems for microfinance institutions, as they usually face higher default rates and higher transactions costs than traditional finance providers. If such restrictions exist, this can place severe constraints on the reach and sustainability of microfinance institutions. In some countries, the only way MFIs could operate sustainably whilst targeting the poor was to lobby the government to change the regulatory regime. In others, MFIs have instead been forced to target financially more affluent clients, as they usually have better repayment rates on loans.

2.1.3.3. Government mandates in some developing countries (e.g. India, Nepal), exist for financial sector institutions to provide a certain proportion of their portfolio to either the rural sector, or specifically the poorer sectors of society. Commercial financial institutions are therefore forced to think about how to provide some services to the poor. Often they may do this by allocating funds to microfinance institutions, in lieu of providing their own services.

2.1.4. *Legal enforcement of financial contracts*:

2.1.4.1. Given that there will always be some defaults on loans, it is important to understand the avenues available to reclaim from defaulters. In some countries, with appropriately worded contracts, it may be possible to get the police to charge defaulters directly, without needing to commence with court proceedings. Where property rights are less clear, and less firmly enforced, it may be more difficult to pursue defaulters. Generally traditional finance products require significant collateral before a loan is issued. This is one of the significant differences with microfinance, where loans are generally issued without collateral. Defaults on loans will therefore result in relatively large losses for the lender.

2.1.5. *Economic and Social Policy Environment:*
These characteristics in a country greatly affect the ability of MFIs to provide financial services, and the goals they may target.

2.1.5.1. Political stability: It is usually difficult to operate MFIs in countries subject to great political instability. The higher risk involved in making financial decisions given this instability will have to be passed on to the users of the financial products, if it is possible to operate at all. However, from a development perspective, it is usually the places that face the most upheaval that could benefit the most from the provision of donor capital for lending services, to smooth the economic effects of the upheaval.

2.1.5.2. Economic Stability: Where there is economic stability, financial decisions can be taken with more certainty. The following are necessary to consider when assessing both the environment and the strategies needed for providing finance.

2.1.5.2.1. Inflation: This can erode the value of repayments on loans, and can generally discourage saving. MFIs sometimes operate in countries where there are high rates of inflation. Often the solution is to link loans to "hard currencies" (e.g. US dollar). This can however open up even further risks for the MFI and clients to manage.

2.1.5.2.2. Interest Rates: As mentioned earlier, the policy of setting local interest rates will influence the alternative uses of the MFI's funds in the economy. An interest rate charged on MFI loans should be taken at least with some reference to the policy and level of rates on government and bank lending.

2.1.5.2.3. GDP growth levels give an idea of the opportunities in an economy for growth. Countries that enjoy solid growth have more opportunities for new businesses, and generally may have better success with microentrepreneurships (*ceteris paribus*).

2.1.5.3. Government Assistance in Encouraging Microenterprise: This assistance can take two forms:

2.1.5.3.1. Investment in infrastructure and human resource development: For the successful growth of microenterprises, it is very useful if there is investment in infrastructure (such as roads, electricity etc) by governments to aid the smooth operation of markets. Investment in education is essential as well. From experience, it is usually areas with the lowest literacy rates that benefit the least from the provision of microfinance services. People without basic education may not have the necessary skills to operate a small business, save or manage credit.

2.1.5.3.2. Direct assistance, either through donor funding, or policy initiatives that encourage the starting up of small businesses (such as easy legal administration, tariffs etc).

2.2. Credit Assessment & Interest Rate Policy on Lending Activities

Lending services provided by MFIs are vulnerable to the risk of clients defaulting. Poor people generally have few assets to fall back on in times of hardship, and MFIs can lose large proportions of the loan balance if they default. Outlined below are some techniques used to manage this problem.

2.2.1. *Limiting chance and extent of default:*

2.2.1.1. If the loan term and repayment schedule match the needs of the borrower, they can reduce the chance of default. E.g. finance needs for investment in agricultural production are likely to be more seasonal than investment in trading activities.

2.2.1.2. Requiring some collateral or collateral substitute can reduce default. Usually, collateral is something that the very poor do not have. Substitutes are often needed, such as group guarantees (where members jointly guarantee each other's loans), character references (where loans are only made to those regarded well in a community), or the threat of prosecution for non-repayment.

2.2.1.3. *Accounting properly for loan losses:* MFIs assess the quality of their loan book through a "portfolio report". A portfolio report involves tracking the various statistics about the loan portfolio, including the volume of new loans, average sizes of existing loans, and the size of loans in arrears. This is usually plotted over time to see if there is any deterioration. An assessment of the recoverable proportion of problem loans is necessary to ensure adequate financial control on the entity. A failure to adequately assess loan losses can lead to mis-pricing of loans, and the eventual collapse of the institution. Once loans are identified as being fully unrecoverable, they should of course be written off straight away. It is important to keep subsidies provided by donors to cover poor loan performance as an explicit item in the accounts, so as to assess the underlying performance of the scheme (without subsidies).

2.2.1.4. *Calculation of interest rates:* Interest rates that are set need to account for the rate of loss through default on the loan portfolio.

2.3. Regulation:

Regulation of financial intermediaries is designed to ensure solvency, acceptable customer service standards, competition and confidence in the financial system. The standards in the developing world can vary significantly in complexity and reach. Most MFIs do not operate under the normal suite of government regulations for the formal financial sector. The issue of regulation of MFIs is perhaps of less importance to a country if institutions mainly rely on donor funds, and do not engage in deposit taking activities. As MFIs start relying more on private capital to fund their loans, and view sustainability as a necessity, appropriate regulation will be important to ensure trust in the sector.

2.4. Tension between sustainability and meeting development goals:

Of the estimated 10,000 microfinance institutions around the world the UNCDF (United Nations Capital Development Fund) estimates that only 2% of these are financially self-sufficient. The vast majority of MFIs rely on donor funding to subsidise their loan portfolio in order to continue operations. While ensuring MFIs are self-sufficient would certainly increase supply of services, it may mean that the poorer segments in a country (i.e. the sectors that need the most help in developing) may not be serviced. The poorest segments in a country are innately the riskiest to lend to. A trade off is needed therefore between achieving financial sustainability and reducing poverty.

2.4.1. Development Objectives that are targeted by MFIs:

MFIs typically try and service the financial needs of unserved markets as a means of reducing poverty. The development objectives they aim for could include the following:

- To reduce poverty
- Empower disadvantaged groups e.g. women
- Create employment
- Help existing businesses grow or diversify their activities
- Encourage new businesses

2.4.2. *Can the "poorest of the poor" be targeted in these development objectives?*

2.4.2.1. The World Bank suggests that the poorest of the poor may not benefit from microfinance services[3] until other social services are provided (e.g. education, health etc.). The very poor may not have adequate opportunities or skills to make use of credit provided to them. It may not be possible to lend to them in the long run unless they receive basic training on running a business, and have a minimum level of health care.

2.4.2.2. A study by Hulme and Moley[4], suggests that there may even be unforseen negative effects if the poorest are inappropriately targeted by MFIs. Their study involved comparing the growth in borrowers' income against a control group. It suggested that financially sustainable institutions succeeded in reducing poverty of the "middle and upper strata" of the poor. Clients that were very poor to begin with, were worse off after borrowing. Their long term overall income did not rise, as they struggled with the financial burden of repayment.

2.4.2.3. If the poorest are targeted, there will be a limited source of donor funds for the subsidies. Operating on such a basis means that more time and energy has to be spent on ensuring that the money is directed to the most needy clients, in order to ensure that the programs are having the greatest possible influence.

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[3] Microfinance Handbook, 1999, Washington DC, The World Bank
[4] Finance Against Poverty, 1996, London, Routledge

2.4.3. *Sustainable funding – the way of the future?* Bodies like the World Bank and the Asian Development Bank advocate that MFIs provide financial services in a sustainable manner. The sustainability approach encourages institutions to cover their lending costs and manage risks to return profits, similar to the principles of the established financial services industry. The major advantages in this paradigm stem from the increase in supply of microfinance services to the economically active poor, through the increased investment by commercial lenders. This also allows savings institutions to mobilise pooled funds on a sustainable basis. According to the World Bank, donor funding can be freed up to support alternative social investment.

2.5. Funding sources: Donor vs Market

2.5.2. Donor funding has historically been the major source of funds for MFIs. This of course has meant that the supply of microfinance services has been limited by the amount of donor capital available. Listed below are some of the major donor organisations involved in microfinance.

Box 2.4- CGAP Donors

Australian Agency for International Development
Belgian Administration for Development Cooperation
Canadian International Development Agency (CIDA)
Royal Danish Ministry of Foreign Affairs
Ministry of Foreign Affairs, Finland
Agence Française de Développement (AFD), France
Ministère des Affaires Étrangères (MAE), France
Kreditanstalt fur Wiederaufbau (KFW), Germany
Federal Ministry for Economic Cooperation and Development (BMZ), Germany
Society for Technical Cooperation (GTZ), Germany
Ministry of Foreign Affairs, Italy
Japan Bank for International Cooperation (JBIC)
Ministry of Foreign Affairs of Japan
Ministère des Finances, Luxembourg
Ministère des Affaires Étrangères, Luxembourg
Ministry of Foreign Affairs, Netherlands
Norwegian Agency for Development Cooperation (NORAD)
Royal Norwegian Ministry of Foreign Affairs
Swedish International Development Cooperation Agency (SIDA)
Swiss Agency for Development and Cooperation (SDC)
Department for International Development (DFID), UK
US Agency for International Development (USAID)
African Development Bank (AfDB)
Asian Development Bank (AsDB)
European Bank for Reconstruction and Development (EBRD)
International Fund for Agricultural Development (IFAD)
European Commission
Inter-American Development Bank (IDB)
International Labour Office (ILO)
United Nations Development Programme (UNDP)
United Nations Capital Development Fund (UNCDF)
United Nations Conference on Trade and Development (UNCTAD)
World Bank
Source: www.cgap.org/html/ac_members_donors.html

2.5.3. *Market based funding:* Given the great demand for microfinance that exists amongst the poor, and the limited amount of donor capital available, some MFIs are seeking capital through the established financial markets (either through commercial paper or equity offerings). South America in particular has seen offerings like this. However, this is difficult for all but the largest providers, as the information necessary for the capital markets is often difficult to provide, and the required return on investments may be unachievable. The issue of assessing different sources of funds is beyond the scope of this paper.

2.6. Differences with established financial services providers: Microfinance services tend to mirror, and provide many similar services to traditional finance products. There are however many differences in the way these services are provided.

2.6.2. *Decentralized structure:* Microfinance organisations usually have an extremely decentralised structure, as a result of serving communities over large geographic distances, but with limited electronic communication facilities. The infrastructure is generally weak, with a lot of the control lying with the people in small regional communities. In most structures there is little communication between the units on a day to day basis, as staff generally work on a local level providing the services to clients. The loan staff usually have close contact with their clients. The fact that usually loans are provided with very limited collateral, requires this closer interaction, to ensure that the institutions can directly and effectively manage their risks.

2.6.3. *Low loan and savings account sizes:* Account sizes of the poor are naturally quite small in comparison to established financial services providers, reflecting in part the limited ability of the poor to use large volumes of money productively, or save large volumes of money.

2.6.4. *High expenses:* The small size of the accounts, and the highly labour intensive lending process result in high expenses for MFIs. High expense ratios are limited to some extent by keeping very limited documentation on the services provided. It can however make it difficult to track and analyse the performance of the portfolio.

2.6.5. *Limited education and financial skills of clients:* This problem often means that the poor may not have the skills to make full use of the finance provided, or to manage it properly.

Section 3: Is there scope for actuarial involvement?

3.1. Why would actuaries want to get involved?

Without a doubt, earning lots of money is NOT one reason to get involved in microfinance. Most of the MFIs that might use actuarial services run bare-bones operations and do not have the financial resources to pay for actuaries at commercially viable rates.

So why should actuaries get involved? In the authors' views, it is so that we can play our part in encouraging the development of poor communities to be financially self reliant. As actuaries, we perhaps don't see the impact of our work directly affecting the lives of people. Here is one area, where our skills can help improve living standards of a group, perhaps substantially.

3.2. Has there been actuarial involvement to date?

3.2.1. *Current Involvement:* There are not many actuaries involved in microfinance at the moment. The only case of an actuarial body assisting an MFI that we are aware of, is a case in Pune, India. This involved collaboration between an NGO *Inter Aide* (non-government-organisation), and the *IAA / IA* (*International Actuarial Association / Institut des Actuaires*). They financed 2 French actuarial students for 4 months in Pune to work with an actuary who was already working for InterAide on tariffs for a recently launched health mutual for slum dwellers. This came under the *Actuaries without Frontiers* initiative of the *IAA*, although the effort in setting up the sponsors was carried out by the *Institut des Actuaires* in France.

BOX 3.1 The Inter Aide / Annapurna Pariwar programme in Pune, India

Inter Aide is a French trust, backed by funds from various private and institutional bodies. Its motto is to "setup and follow up concrete sustainable development programs".

In Pune and Mumbai, Inter Aide is assisting various NGOs with the provision of credit, savings and insurance microfinance services to communities of urban slum dwellers. For this task, Inter Aide has employed an actuary, François-Xavier Hay.

One of those NGOs, *Annapurna Parivar* in *Pune* had been providing savings and credit services for some years. In 2001, due to a lack of financing capacity and professionalism, this organization was not able to grow to meet the demand for its services. Inter Aide started to work with them on credit and savings, giving management support, organisational support and some basic financial input. Based on discussions with François-Xavier Hay, it was apparent that there was demand from the grass roots for more services to be provided. In that year, one of the members of the community faced a severe heart complaint and needed a relatively expensive operation (>Rs100,000). Her husband could not afford to pay for this with his income – but attempted to raise the funds anyway by selling his main asset: the rickshaw he drove for a living. His efforts were unfortunately in vain, and instead he was left facing financial ruin. Given this extreme example, the local community members decided that they needed some risk management service to help members finance unforseen health costs they may face.

The fact that an actuary was employed in this situation was key to the health insurance mutual being thought of and set up. The additional fact that the actuary is working alongside the local community enables the transfer knowledge of running the scheme to locals. The *Institut des Actuaires* sent 2 student actuaries to assist with the financial evaluation and scoping stage of the project. Inter Aide expects to be involved for 5 years in total, right from setup to the training of local staff to make sure the project can be run autonomously.

The mutual has now started providing services. It offers coverage for about 15 relatively common causes of hospitalisation in Pune, such as malaria, caesareans, pneumonia etc. It costs Rs50 per person per year, and offers coverage up to a cost of Rs 5,000 per person per year. To avoid the problems of anti-selection, there are sur-charges imposed where families only insure some members, where there are elderly family members, and where there are alcoholics.

3.3. Where can actuarial skills be used?

3.3.1. *What is our skill set?*

Actuaries are involved in various aspects of the financial services industry. Some of the areas worked in are shown below in Box 3.2:

Box 3.2- What do actuaries do?

Valuations
Pricing
Product Design
Financial Management
Credit rating
Management Information System Design

3.3.2. *Which of these skills can be used in microfinance?* Listed below are some of the areas where we think actuarial skills can be used.

3.3.2.1. Financial Management and product design: Basic knowledge about how to design and monitor financial performance is not easy for people without a financial services background. From discussions with François-Xavier Hay, the French actuary in Pune working with *Inter Aide*, it appears that this is often the most useful knowledge that an outside expert can bring to a scheme.

3.3.2.2.Pricing and design of insurance products: To date most developments in microfinance have been on the lending side. Historically, actuaries have not been as heavily involved in credit provision, as most other financial services. It is perhaps to be expected therefore that we have not had a big involvement in microfinance schemes. Some MFIs are expanding to provide insurance and savings services to their product range. Actuaries have historically had much more involvement with such products, and there will undoubtedly be more demand for the skills if and when this happens.

3.3.2.3.Management information system design: MFIs have great difficulty in tracking and storing data that can be used for scheme management purposes. Data is often not computerised, and may not be set up in a useful way that can help with assessing risk of default, risk accumulation by area etc. Actuaries can help in assessing what should be tracked for management of the scheme.

3.4. What can the Institute of Actuaries of Australia do to get involved in microfinance?

3.4.1. ***Sponsor an MFI either locally, or internationally:*** As a professional body, if we want to be involved in microfinance, one way would be to provide sponsorship to an MFI to allow an actuary to work with them for some time. Funding will always be difficult in these matters, and it would probably require at least some level of commercial support. Paying for people's time and effort is not easy given commercial realities. Perhaps students / people without financial commitments might be interested in volunteering some of their time. The ongoing nature of the schemes may mean that the support will be needed for quite a long time until there is a transfer of skills.

3.4.2. ***Market ourselves to funding bodies such as aid agencies:*** In Australia, there is not much knowledge or support of microfinance. Bodies like AusAID (the Australian Government's Overseas Aid programme) do however sponsor financial professionals to work in developing countries to assist in the establishment of financial services. Lobbying and explaining the worth of our skills may make it easier for actuaries to be desired by the schemes. Other possible organisations to approach are the World Bank and the Asian Development Bank.

3.4.3. ***Have a more active role in the IAA Actuaries Without Frontiers project:*** This is a group that was set up under the IAA to encourage volunteerism amongst actuaries to help spread our skills to regions where they are not used. So far, this is the only actuarial group that is looking at microfinance that the authors of this paper are aware of. It might be easier to seek involvement in microfinance through a global body, rather than through local initiatives.

3.4.4. ***Seek to raise awareness amongst members of the Institute of the opportunity and need for skilled financial professionals to help with these issues:*** Clearly, knowledge amongst members about the role they can play in development is crucial for actuaries to become involved in microfinance.

Appendix: An Interview with François-Xavier Hay of Inter Aide

Q: Who sponsored the project you are involved in and why?

FX-Hay: I am employed by Inter Aide a French Trust. We get funds from various private bodies as well as institutional funders. Our motto is to "setup and follow up concrete sustainable development programs".

Institut des Actuaires helped us for the first "feasibility part" sending 2 actuarial students for 4 months. The project I am in charge of consists of providing microfinance technical support (along with financial support) through a network of NGOs. The health mutual fund is a project within this context.

·*Q: When does it finish?*

FX-Hay: We intend to setup this mutual fund in 5 years at a good autonomy level.

Q: What impact do you say you had on the project?

FX-Hay: Our impact is to improve the slum dwellers' livelihood, working with them on participative projects like microfinance mutual funds, and individually with dynamic social follow up for the most depressed families.
Keeping in mind this goal, an actuary in this context, brings techniques like a hydro engineer in watershed programs would do. Micro finance/insurance can be as complicated as finance/insurance. I think one big impact is education that is spread through actions.

Q: Are there any other areas you see actuaries using their skills?

FX-Hay: I guess any areas where actuaries are working in the formal corporate world. For example, we are in the process of implementing quality circles-charts at the moment.

Q: What was your motivation in doing this?

FX-Hay: Typical actuarial job brings so much complexity to fewer and fewer well off people, having mainly a 15% return on capital as a given target. Being part of those, among the 5% of the highest payroll of the planet (not difficult) I felt that my life was going in the wrong way.

Q: What have you personally got out of it?

FX-Hay: Some sense in my life and lot of extraordinary lessons from the people I work with. I got also the conviction that this work is closer to what my life should be, compared to what I was doing previously.

Q: How have the clients benefited from the project?

FX-Hay: They are not clients. They are partners or shareholders in this project. From my experience that is the only way to benefit from something. A client gets a temporary service. The goal is not to feed the slumdwellers. We intend to share everything including the direction board seats, when the education will be good enough.

Q: How do you suggest actuaries push the agenda of being involved with the poor?

FX-Hay: We could share more about it in our professional meetings and forum. On the other hand, I think It would be fantastic if the lessons we learn in this type of project would be studied in the “so-called” developed countries to improve there, the social situation and its future.

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