Chapter-4

Literature Review

“This life is short. The vanities of the world are transient, but they alone live who live for others, the rest are more dead than alive.”

Swami Vivekananda

4.1 The History of Microfinance

Microcredit and Microfinance are relatively new terms in the field of development, first coming to prominence in the 1970s, according to Robinson (2001) and Otero (1999). Prior to then, from the 1950s through to the 1970s, the provision of financial services by donors or governments was mainly in the form of subsidized rural credit programmes. These often resulted in high loan defaults, high lose and an inability to reach poor rural households (Robinson, 2001). Robinson states that the 1980s represented a turning point in the history of microfinance in that MFIs such as Grameen Bank and BRI2 began to show that they could provide small loans and savings services profitably on a large scale. They received no continuing subsidies, were commercially funded and fully sustainable, and could attain wide outreach to clients (Robinson, 2001). It was also at this time that the term “microcredit” came to prominence in development (MIX3, 2005). The difference between microcredit and the subsidised rural credit programmes of the 1950s and 1960s was that microcredit insisted on repayment, on charging interest rates that covered the cost of credit delivery and by focusing on clients who were dependent on the informal sector for credit (ibid.). It was now clear for the first time that microcredit could provide
large-scale outreach profitably. The 1990s “saw accelerated growth in the number of microfinance institutions created and an increased emphasis on reaching scale” (Robinson, 2001). Dichter (1999) refers to the 1990s as “the microfinance decade”. Microfinance had now turned into an industry according to Robinson (2001). Along with the growth in microcredit institutions, attention changed from just the provision of credit to the poor (microcredit), to the provision of other financial services such as savings and pensions (microfinance) when it became clear that the poor had a demand for these other services (MIX, 2005).

The importance of microfinance in the field of development was reinforced with the launch of the Microcredit Summit in 1997. The Summit aims to reach 175 million of the world’s poorest families, especially the women of those families, with credit for the self-employed and other financial and business services, by the end of 20154 (Microcredit Summit, 2005). More recently, the UN, as previously stated, declared 2005 as the International Year of Microcredit.

MIX defines an MFI as “an organisation that offers financial services to the very poor.” (MIX, 2005). According to the UNCDF (2004) there are approximately 10,000 MFIs in the world but they only reach four percent of potential clients, about 30 million people. On the other hand, according to the Microcredit Summit Campaign Report (Microcredit Summit, 2004) as of December 31st 2003, the 2,931 microcredit institutions that they have data on, have reported reaching “80,868,343 clients, 54,785,433 of whom were the poorest when they took their first loan”. Even though they refer to
microcredit institutions, they explain that they include “programs that provide credit for self-employment and other financial and business services to very poor persons” (Microcredit Summit, 2004). The differences between these sources highlight a number of points. Firstly, how the two terms, microcredit and microfinance are often confused and used interchangeably, though in the strictest sense microcredit should refer only to the provision of credit to the poor. Secondly, the difference between the statistics shows how difficult it is to get a true picture of how many MFIs are in existence today and how many clients they are reaching. The IMF5 state that “no systematic and comprehensive data on MFIs is collected and there are no authoritative figures on key characteristics of the microfinance industry, such as the number and size of MFIs, their financial situation, or the population served” (2005).

Despite the lack of data on the sector, it is clear that a wide variety of implementation methods are employed by different MFIs.

The Grameen Bank (2000a) has identified fourteen different microfinance models of which I will focus on three; Rotating Savings and Credit Association (ROSCAs), the Grameen Bank and the Village Banking models, as these are the three microfinance models that I encountered during my field research.

Rotating Savings and Credit Associations These are formed when a group of people come together to make regular cyclical contributions to a common fund, which is then given as a lump sum to one member of the group in each
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cycle (Grameen Bank, 2000a). According to Harper (2002), this model is a very common form of savings and credit. He states that the members of the group are usually neighbors and friends, and the groups provides an opportunity for social interaction and are very popular with women. They are also called merry-gorounds or Self-Help Groups (Fisher and Sriram, 2002).

The Grameen Solidarity Group model, This model is based on group peer pressure whereby loans are made to individuals in groups of four to seven (Berenbach and Guzman, 1994). Group members collectively guarantee loan repayment, and access to subsequent loans is dependent on successful repayment by all group members. Payments are usually made weekly (Ledgerwood, 1999). According to Berenbach and Guzman (1994), solidarity groups have proved effective in deterring defaults as evidenced by loan repayment rates attained by organisations such as the Grameen Bank, who use this type of microfinance model.

The initial objective was to reach 100 million people by 2005 but at the Latin America/Caribbean Microcredit Individual, Intermediaries, NGOs, Peer Pressure, Rotating Savings and Credit Associations, Small Business and Village Banking.

Under the Grameen Bank variation of this model, groups contain five members and savings must be contributed for four to eight weeks prior to receiving a loan. Savings must also continue for the duration of the loan term. Only two of the group members receive a loan initially. After a period
of successful repayment, two highlight the fact that this model has contributed to broader social benefits because of the mutual trust arrangement at the heart of the group guarantee system. The group itself often becomes the building block to a broader social network (1994, p.121).

Village banks are community-managed credit and savings associations established by NGOs to provide access to financial services, build community self-help groups, and help members accumulate savings (Holt, 1994). They have been in existence since the mid-1980s. They usually have 25 to 50 members who are low-income individuals seeking to improve their lives through self-employment activities. These members run the bank, elect their own officers, establish their own by-laws, distribute loans to individuals and collect payments and services (Grameen Bank, 2000). The loans are backed by moral collateral; the promise that the group stands behind each loan (Global Development Research Centre, 2005).

The sponsoring MFI lends loan capital to the village bank, who in turn lend to the members. All members sign a loan agreement with the village bank to offer a collective guarantee. Members are usually requested to save twenty percent of the loan amount per cycle (Ledgerwood, 1999). Members’ savings are tied to loan amounts and are used to finance new loans or collective income generating activities and so they stay within the village bank. No interest is paid on savings but members receive a share of profits from the village bank’s re-lending activities. Many village banks target women predominantly, as according to Holt (1994, p.158) “the model anticipates that female participation in village banks will enhance social
status and intrahousehold bargaining power”. In the literature, the terms microcredit and microfinance are often used interchangeably, but it is important to highlight the difference between them because both terms are often confused. Sinha (1998) states “microcredit refers to small loans, whereas microfinance is appropriate where NGOs and MFIs1 supplement the loans with other financial services (savings, insurance, etc)”. Therefore microcredit is a component of microfinance in that it involves providing credit to the poor, but microfinance also involves additional non-credit financial services such as savings, insurance, pensions and payment services (Okiocredit, 2005).

4.2 The Self-Sufficiency and Sustainability of MFIs
Unlike formal sector financial institutions, the large majority of MFIs are not "sustainable" where sustainability is equated in microfinance literature and parlance with financial self-sufficiency. Instead, most MFIs are able to operate without covering their costs due to subsidies and gifts from governments and other donors. Notwithstanding, the microfinance industry is dominated by an institutionist paradigm (Morduch (2000), Woller et al. (1999a)) asserting that an MFI should be able to cover its operating and financing costs with program revenues. The conceptual foundations of the institutionist paradigm stem to a large degree from the work of researchers at the Ohio State University’s Rural Finance Program. Their analysis of the failed rural credit agencies established by several LDC governments during the 1960s and 1970s diagnosed the primary cause of failure to be the “lack of institutional viability” (Gonzalez-Vega (1994)). This diagnoses led logically to two principal conclusions: (1) institutional sustainability was key
to successful provision of financial services to the poor and (2) financial self-sufficiency was a necessary condition for institutional sustainability.

The institutionist argument is consistent with Hollis and Sweetman (1998a) who discuss six historical cases in an attempt to identify the institutional designs that facilitated success and sustainability. Morduch (2000) reports a rough estimate that only 1 percent of MFIs are currently financially self-sustainable and that no more than 5 percent ever would be. Additionally, Bennett and Cuevas (1996) argue for the need of building sustainable financial systems for the poor from three perspectives: a) financial sector development, b) enterprise formation and growth, and c) poverty reduction.

In contrast, Welfarists take odds with institutionists over the issue of sustainability.

Welfarists argue that MFIs can achieve sustainability without achieving financial self-sufficiency (Morduch (2000), Woller et al. (1999a)). They argue that donations serve as a form of equity, and as such, the donors can be viewed as social investors. Unlike private investors who purchase equity in a publicly traded firm, social investors do not expect to earn monetary returns. Instead, these donor-investors realize a social, or intrinsic, return. Social investors can be compared to equity investors who invest in socially responsible funds, even if the expected risk-adjusted return of the socially responsible fund is below that of an index fund. These socially responsible fund investors are willing to accept a lower expected financial return because they also receive the intrinsic return of not investing in firms that
they find offensive. Microfinance social investors take this notion to the limit, generally earning zero financial returns and relying totally upon intrinsic returns. Welfarists tend to emphasize poverty alleviation, place relatively greater weight on depth of outreach relative to breath of outreach, and gauge institutional success more so according to social metrics. This is not to say that neither breadth of outreach nor financial metrics matter. Welfarists feel these issues are important, but they are less willing than institutionists to sacrifice depth of outreach to achieve them. Welfarists envision an industry characterized by a plurality of institutional types including both profit-seeking and social-mission entities targeting Depth of outreach here refers to servicing the very poorest of clients, whereas breadth refers to servicing large numbers of clients, even if they are only marginally poor or non-poor.

Morduch (2000) refers to the debate between institutionists and welfarists as the “microfinance schism.” Driving the schism are competing perceptions of the implications for financial self-sufficiency on depth of outreach. General consensus holds that there exists a tradeoff between financial self-sufficiency and depth of outreach (e.g., von Pischke (1996). But masked by this consensus is much disagreement about the nature, extent, and implications of this tradeoff. Nonetheless, what little evidence exists suggests that those MFIs that have achieved true financial self-sufficiency have also tended to loan to borrowers who were either slightly above or slightly below the poverty line in their respective countries (Navajas et al., (2000). These MFIs are able to capture economies of scale by extending larger loans to the marginally poor or non-poor. Although still an open
question, this limited evidence leads many to conclude that if financial self-sufficiency is desired, then the very poor will not be reached by MFI services. That is, the MFI will not be able to achieve enough depth to reach those who need credit the most desperately.

An important area of financial research that has yet to be rigorously explored but which has significant potential to inform the debate mentioned above is the feasibility of introducing microfinance into the world capital markets. With the high repayment rates of many MFIs (e.g., upper 90 percent in many cases), there exists the potential to tap MFIs into world capital markets through instruments such as commercial banks loans, commercial paper, bond financing, equity financing, or through the bundling and securitization of MFI loans. Determining avenues to permit investment in MFIs via capital markets is an area of research that seems tailored to the tools and theory of finance academics. In practice, there are currently several ongoing attempts to tap capital market investors for MFI funding. The ACCION Gateway Fund makes equity, quasi-equity, and debt investments in MFIs with a proven track record of financial sustainability. The AfriCap Microfinance Fund makes equity investments in African-based MFIs, as well as financing technical assistance for said MFIs. Blue Orchard Finance promotes private investments in microfinance by identification and analysis of MFIs and investment monitoring and reporting of its funds. Using a venture capital approach, Profound International is an investment fund that attempts to earn a competitive return for its shareholders while facilitating MFI growth. Finally, the Community Reinvestment Fund provides a secondary market for microfinance loans by securitizing the microloans and collateralizing bonds
that are sold to private investors. If capital markets can be tapped to give MFIs the needed funds to be self-sufficient, and if investors can earn returns commensurate with the risk borne, the vision of a poverty-alleviation mechanism that pays for itself (both implicit and explicit costs) may be realized in greater proportions. Issues surrounding MFI sustainability and self-sufficiency, and the implications/tradeoffs implied therein seem well-suited for finance researchers. Few rigorous studies have been conducted in a financial institutions framework to develop and test theory pertaining to MFI self-sufficiency. Some evidence does exist however, that MFIs have historically been very resilient and sustainable. Hollis and Sweetman (2001) discuss the microloan funds in 18th and 19th century Ireland. They report that Irish loan funds thrived for over 100 years due to their ability to change rapidly to external conditions, at one point providing financial services for 20% of Ireland's population. It took a combination of formal bank lobbying that resulted in anti-MFI legislation and the Irish potato famine to cause the demise of these early loan funds.

Patten et al. (2001) provide a more recent historical example of the resilience of MFIs and their clientele. They compare the performance of the Indonesian MFI Bank Rakyat Indonesia (BRI) to formal Indonesian banks during the East Asian financial crisis. They find that BRI performed superior to the formal banking sector when comparing both loan repayment rates and savings rates of members. Having discussed MFI self-sufficiency and sustainability, we now turn our attention to the products and services offered within the current microfinance framework.
4.3 Microfinance Institution Products and Services

MFIs provide similar products and services to their customers as formal sector financial institutions. The scale and method of delivery differ, but the fundamental services of savings, loans, and insurance are the same. Notwithstanding, to date most efforts to formalize microfinance have focused on enterprise lending (loans for enterprise formation and development) which remain by far today the dominant product offered by MFIs (Nourse (2001), Woller (2002a)). This, however, has slowly begun to change. Increasingly today MFIs have begun to offer additional products, such as savings, consumption or emergency loans, insurance, and business education. Nourse (2001) reviews the context and rise of microfinance products and argues there is a need for savings and insurance services for the poor and not just credit products. He goes on to argue that MFIs need to provide tailored lending services for the poor instead of rigid loan products. Supporting this latter assertion of Nourse (2001), Eyiah (2001) develops a model of small construction management contractors and MFIs in developing countries that provides a tailored lending structure for microenterprise contractors.

Similarly, Woller (2002a), Cohen (2002), and Dunn (2002) argue that MFIs need to be more client-focused, including offering a mix of financial products tailored to the varied needs and wants of poor consumers. Microcredit is most often extended without traditional collateral. If physical collateral were a requirement for borrowing, most MFI clientele would be unable to participate due to their extreme poverty level. Because borrowers do not have physical capital, MFIs focus on using social collateral, via group
lending. Group lending encompasses a variety of methodologies, but all are based on the principal of joint liability. In essence, the group takes over the underwriting, monitoring, and enforcement of loan contracts from the lending institution (Wenner (1995)).

Under joint liability each group member is made responsible for the loans of other group members. If one member defaults, the other group members are required to cover the loan from their own resources, and if they do not, they lose access to future loans. It is thus in each member’s interest to ensure that the other members pay. Social collateral also works through reputational effects on group members in which repayment of loans is seen by group members as necessary to maintain their social standing in the community (Woolcock (2001)). Goldmark (2001) suggests methods that may help build social collateral, thereby making loans even more secure. Van Tassel (1999) constructs a model and one-period game to determine the optimal group lending contract under asymmetric information. He concludes that agents will always form groups with agents of the same type and that agents' types can be distinguished according to the rate at which they are willing to trade increased joint liability commitments for lower interest rates. Ghatak (1999) concludes that group lending not only increases repayment rates and welfare via social collateral, but also due to peer selection by members of the lending group. Similar to Ghatak, Islam (1995) concludes that lenders using peer-monitoring systems can charge lower rates relative to conventional lenders and that at the same interest rate, the expected rate of repayment is higher with lower risk when using peer monitoring.
Within the lending function of microfinance, it is useful to divide loans into enterprise loans and consumption/emergency loans. As mentioned above, the loan programs typical of MFIs almost entirely consist of enterprise loans. Nonetheless, significant unfulfilled market demand also exists for consumption and emergency loans (Woller (2002a)). The demand for consumption/emergency loans is evident in developing countries by the thriving business of the local moneylenders. Although stereotyped as a loan shark preying on the desperation of the poor by charging exorbitant interest rates and employing unsavory collection methods, the traditional moneylender provides a valuable service for poor people who require quick and flexible infusions of cash to meet immediate and pressing consumption needs or to cope with emergencies. Like savings, consumption/emergency loans form an integral component of poor households’ risk management and coping strategies. Those in the microfinance industry who assumed that formal MFIs would drive the traditional moneylenders out of business have been shocked to learn that the demand for moneylenders has remained robust, even among clients of microfinance programs. A good illustration is the case described by Perry (2002), in which women moneylenders in Senegal used loans from a local MFI to finance their own money lending businesses. It turns out that just as the terms of the loans offered by moneylenders (rapid loan approval, flexible terms, repayment periods measured in days or weeks, and lump-sum payments at exorbitant interest rates) makes them generally ill-suited as a source of enterprise financing, the terms of enterprise loans offered by MFIs (slow turnaround, inflexible terms, repayment periods measured in months or a year, 8 Although social collateral is widely used, it is not universally accepted by all as the optimal
approach. For example, Mustafa (1994) concludes that alternate forms of institutional arrangements may be better than credit cooperatives in alleviating poverty.

An important source of consumption/emergency loans in developing countries are pawn shops. Ismail and Ahmad (1997), for example, discuss the role of pawnshop lending in Malaysia. They report that Malaysian pawnshops have increased in importance as lending institutions and are projected to continue to do so due to more affordable transportation, interest rate regulations, and financial liberation, among other factors. Along with the lending function, a market for savings exists in poor areas around the world. Savings services offered by MFIs can be divided into forced and voluntary savings, with forced savings far exceeding voluntary savings. In a forced savings program, microfinance participants are required to save a minimum amount each week (or other set period of time). Forced savings ostensibly teaches financial discipline and provides the MFI with additional information about clients. In practice, forced savings serve primarily as a form of cash collateral. Rules regulating when and how clients may withdraw forced savings are typically highly restrictive.

The second form of savings is voluntary, flexible savings (Nourse (2001), Montgomery (1996)). Millions from all strata of poor do not operate enterprises, but they do save, albeit often in very small amounts and at inconsistent intervals (Beverly and Sherraden (1999). Savings are integral to poor households’ risk management strategies; they constitute the first line of defense to help poor households cope with the external shocks, emergencies,
and life-cycle events to which they are so vulnerable; and they play a crucial role in allowing the poor to take advantage of productive investment opportunities (Grosh and Somolekae, 1996).

A reasonable estimate of the market for savings among the poor indicates that savings demand substantially exceeds the demand for enterprise loans. Christen (2001), for example, reports that over a space of two to three years, retail banks in Latin America opened millions of small deposit accounts in countries in which MFIs added fewer than 200,000 loan customers over the same period. At MFIs that offer both enterprise loans and voluntary savings, moreover, savers typically exceed borrowers by large multiples.

Characteristic of poor households is extreme vulnerability to risk and external shocks. Traditionally, poor households have managed risk and coped with external shocks through a combination of informal social support networks, savings, and borrowing from informal money lenders. Participation in microfinance programs offers another set of risk management and coping options for poor households. Participation in formal micro insurance schemes offers yet another option. Just as a large demand for formal savings and loans exist among the poor, there is also believed to exist a large demand for formal insurance (Churchill, 2002). Although micro insurance is in the early stages of development, efforts are being made to formalize and design the process. There are some success stories (e.g., FINCA Uganda offers its clients health and other types of insurance through an AIG subsidiary based in South Africa), but overall progress is modest so far owing in part to the very different nature of insurance compared to
savings or loans and to the fact that few MFIs possess specialized knowledge of how to set up. An entire issue (Volume 12, Number 3, 2001) of Small Enterprise Development is dedicated to the issue of micro savings. Topics include the mobilization of various sized savings, the introduction of savings services into an existing MFI, the relative risk to the savings of the poor, the need for flexibility in micro savings instruments, and the tailoring of savings vehicles.

In another example of micro insurance research, Mishra (1994) analyzes crop insurance in Gujarat and finds that the availability of crop insurance resulted in increased loan repayments in absolute terms, although it is not clear if the propensity to repay improved. Additionally, Mishra documents a significant increase in the flow of credit to insured farmers after the introduction of the insurance program. Our overview of issues related to microfinance products and services would not be complete without brief discussion of integrative approaches integrating non-financial services (usually education) with financial services to microfinance. A handful of articles have examined integration of microfinance with other development services. Smith (2002) compares minimalist MFI services in Ecuador and Honduras to those offering financial services integrated with health education. Using surveys of 963 Ecuadorian clients and 981 Honduran clients, he finds that clients in integrated programs experienced improved family health, while those in minimalist programs did not. Using 20 minimalist MFIs and 84 banks that offered health education, Smith finds no significant difference in the performance of the MFIs. Also in support of an integrative approach, Edgcomb (2002), Cook et al. (2001), and Dumas
(2001) each use case methodology to analyze MFIs offering integrated business development training. They conclude that business development training significantly improves microenterprise performance and microentrepreneur empowerment.

A final issue meriting mention is provision of equity in lieu of credit for enterprise formation and start-up capital. Pretes and Seibel (2002) discuss several cases of this practice in East Africa. They refer to this service as providing enterprise equity; however, in finance vernacular, this service would most likely be considered a grant. They argue that those who invest (donate) the equity in such cases receive their returns intrinsically, as they do not receive a financial ownership position in the startup firm (microenterprise).

The discussion in this section has demonstrated that at the core, the issues challenging microfinance institutions and formal sector institutions are very similar. The commonalities between both sectors encourages us that mainstream finance tools can be applied to microfinance. At the same time, the unique characteristics of microfinance provide an interesting laboratory to test existing financial theory and to create new theory. Having addressed microfinance products and services, we now turn our attention to the management of microfinance institutions.

4.4 Best Practices in Microfinance Institution Management

When we use the term best practice, we use it in a general framework, realizing, as Dunford (2000) argues, that best practices vary and change
constantly as the microfinance fields matures. Due to the nature of MFI clientele and the disparate environments in which MFIs operate, best practices must be adaptable to the specific area in which the institution operates. Bhatt and Tang (2001c) discuss MFI vehicles, technologies, and performance assessments and conclude that the future success of microfinance will depend on MFI design tailored to specific clients. Bhatt and Tang's assertion highlights the importance of research to develop sound practices of MFI design and management. The primary topics covered within the extant MFI best practice literature include the determination of an optimal interest-rate to charge borrowers, whether to lend to groups or to institutional practices. In usage, however, it is more or less synonymous with practices that promote financial self-sufficiency. Only rarely is the term used to refer to practices that promote achievement of social objectives.

Conning (1999) constructs a theoretical model of the contract design problem facing MFIs that want to maximize impact, target the poor, and achieve financial self-sufficiency. Using data from 72 MFIs, Conning finds that sustainable MFIs that target poorer borrowers must charge higher interest rates, have higher staff costs, and are less leveraged than those targeting less poor borrowers. In contrast, Hollis and Sweetman (1998b) analyze mid-19th century Irish loan funds and find that MFIs were able to lend to the poor at competitive interest rates without subsidies. These Irish MFIs combated informational and enforcement problems while operating at a surplus in a market that formal sector banks would not serve. Indirect evidence that the poor may not mind paying high interest rates can be drawn from Perry (2002) where MFI clients borrow funds to become
moneylenders, presumably successfully lending at rates higher than their MFI charges. The poor who cannot obtain MFI membership are thus willing to pay rates higher than that charged by the MFI. Robinson (1996) also argues that interest rates charged to microfinance borrowers should cover all costs and that the working poor can afford these rates which are relatively low compared to their alternatives. Finally, Fafchamps (1997) uses simulation methodology to show that interest rate subsidies have little impact on whether poor in India invest in non-divisible and irreversible profitable projects.

Another main issue explored in detail in the existing MFI best practice literature is the choice between offering group loans or individual loans. MFIs often rely on social collateral within loan groups to secure their loans (Woolcock (2001)). Gomez and Santor (2001) provide empirical evidence of the importance of social collateral. In an empirical study of 612 group borrowers and 52 individual borrowers in Canada, they report that group lending and the presence of neighbors have a positive correlation with self-employment earnings. It follows that borrowers with higher earnings will have an easier time of servicing their microloans. Woolcock (1999) also addresses the issue of group-lending design. Analyzing five cases of MFI failures in Ireland, Bangladesh, and India, he concludes that group performance depends on MFI lending policies, cost structures, nature and extent of social relations among group members, and MFI staff. Bhatt and Tang (2001a) go on to discuss group lending under the frameworks of incomplete information theory and transactions cost theory. Based on their analysis, they offer recommendations for setting-up and managing an MFI.
Although group loans make up the bulk of microloans worldwide, individual lending is significant in some areas and is growing in popularity. Armendariz de Aghion and Morduch (2000) consider microfinance beyond group lending in Eastern Europe, Russia, and China. They describe the mechanisms that allow MFIs to successfully penetrate new segments of credit markets. These features include direct monitoring, regular repayment schedules, and the use of non-refinancing threats. We turn next to the importance of sound MFI management practices. Milgram (2001) presents the case of an MFI in the Philippines that attempted to become self-sufficient too quickly, resulting in targeting not-so-poor who already owned operating businesses. She argues that the MFI's rush to self-sufficiency forced it to be at odds with its original mission of targeting the very poor and facilitating the creation of microenterprises. Bhatt and Tang (2001b, 2002) focus on social, financial, and administrative intermediation on the determinants of repayment rates in US microenterprise programs. Tucker (2001) addresses financial performance benchmarking of MFIs. Finally, Park and Ren (2001) empirically contrast the implementation of microfinance services provided by non-government MFIs versus the Chinese government. Their tests indicate that microfinance NGOs have positive results in targeting, sustainability, and impact, whereas government programs do not. The data supports the notion that efficient MFI management contributes significantly to accomplishing microfinance objectives. In articles that address more specific areas of loan structure, Schreiner (2001) and Painter and MKnelly (1999) analyze factors that drive loan size and loan growth respectively. Schreiner identifies seven aspects of loan size and how they impact MFI depth of reach and profitability. Painter
and McKnelly identify factors that drive loan growth and show that these factors vary across loan cycles.

Churchill (2000), Schreiner (2000), and Norell (2001) all address attempts to incorporate existing banking practices into MFIs. Churchill discusses the impact of customer loyalty, similar to the relationship lending literature in mainline finance (e.g., Petersen and Rajan (1994), Berger and Udell (1995), and Cole (1998) and concludes that customer loyalty is key to MFI success. Schreiner discusses the role of credit scoring in MFIs and argues that scoring can add value to the MFI process. Norell discusses techniques that MFIs can use to reduce arrears, which include following-up quickly on loans in arrears, forming strong solidarity groups, updating and enforcing credit policies, and concentrating on the scope of lending. Finally, Woller (2002) reviews the costs and benefits of MFI commercialization and its impact on mission drift. He concludes that the benefits of commercialization outweigh the costs, but recommends that MFIs remain poverty alleviation focused.

4.5 Impact of Microfinance Institutions

McKernan (1996) finds that program participation can exert a large positive impact on self-employment profits, while Pitt and Khandker (1998) find that program credit has a significant impact on the well-being of poor households and that this impact is greater when credit is targeted to women. Seven other studies in Bangladesh (Hashemi et al. (1996); Goetz and Gupta (1996); Schuler and Hashemi (1994); Hashemi and Riley (1996); Schuler et al. (1997); Schuler et al. (1998); Steele et al. (2001)) focus on the question of
female empowerment. All but one find evidence that microfinance program participation exerts a statistically significant impact on one or more aspect of female empowerment, such as contraceptive usage or intrahousehold decision-making. The sole Bangladeshi impact study failing to find significant impacts is Goetz and Gupta who find that significant portions of the women’s loans were 16 Woller (2003) reviews 88 published impact studies, both peer-reviewed and non peer-reviewed. 17 Nine of the ten studies in Bangladesh assessed the Grameen Bank and the Bangladesh Rural Action Committee (BRAC), in addition at times to other Bangladeshi MFIs. The Grameen Bank and BRAC are two of the largest MFIs in the world with borrowers and loan portfolios totaling 2,378,601 and US$192,600,000 (year end 2001) at the Grameen Bank and 2,900,000 and US$159,500,000 (year end 2002) at BRAC.

Outside of Bangladesh, published studies have assessed the impact of microfinance programs in Bolivia (Mosley (2001)), China (Park and Ren (2001)), Ecuador (Woller and Parson (2002)), Ghana and South Africa (Afrane (2002)), Guatemala (Kevane and Wydick (2001); Wydick (1999a), (1999b), (2002)), Honduras and Ecuador (Smith (2002)), Indonesia (Bolnick and Nelson (1990)), Peru (Dunn (2001)), Thailand (Coleman (1999)), Uganda (Barnes et al. (1999), Zambia (Copestake et al. (2001)), and in multiple countries (Mosely and Hulme (1998) and Anderson et al. (2002)). The findings vary considerably from study to study, suggesting that impacts are highly contextually specific.
Analyzing four programs in Bolivia, Mosley (2001) shows that assets and income increased commensurate with initial poverty levels, but also that MFI services may increase vulnerability if borrowers over-leverage. Bolnick and Nelson (1990) find that MFI participation had a positive impact on enterprises that were typically small, labor intensive and growing, although the impact was far from uniform across sectors and target variables. Copestake et al. (2001) find that borrowers who were able to obtain two loans experienced high growth in profits and household income compared to a control sample, but borrowers who never qualified for the second loan were actually worse off due to MFI collection mechanisms.

Wydick (1999a) finds that upward class structure mobility increases significantly with access to credit. Using the same Guatemala data set in a subsequent study (2002), Wydick also finds that rapid gains in job creation after initial credit access were followed by prolonged periods of stagnant job creation. Dunn (2001) finds that program clients’ enterprises performed better than non-client enterprises in terms of profits, fixed assets, and employment. Finally, Anderson et al. (2002) analyze 147 MFIs and finds that microfinance participation increased environmental awareness and common pool resource stewardship. Two published impact studies explicitly assessed community, or village-level, impacts.

In Bangladesh, Khandker et al. (1998) find that program participation has positive impacts on household income, production, and employment, particularly in the rural non-farm sector, and that the growth in self-employment was achieved at the expense of wage employment, which
implies an increase in rural wages. Woller and Parsons (2002) estimate that a microfinance program in Portoviejo, Ecuador contributes $480,000 per year in direct and induced economic benefits to the local economy. Other impact studies address trade-offs that need to be considered when performing microfinance impact assessments. Mosely and Hulme (1998) study 13 MFIs in seven countries (Bolivia, Indonesia, Bangladesh, Sri Lanka, Kenya, India, and Malawi) and construct an "impact frontier" describing the inverse relationship they find between outreach (depth of poverty reached) and impact. Wydick (1999b) constructs a theoretical model to analyze the economic tradeoff between future returns to schooling and the current return to child labor in Guatemalan household enterprises. He finds that in some states, microcredit increases the probability that children will attend school; however, during certain states of moral hazard, the cost of schooling may outweigh the benefits of child labor. Kevane and Wydick (2001) find that targeting microenterprise credit to poor women appears to imply a trade-off between economic growth in favor of poverty reduction and child welfare. In particular, female entrepreneurs of child bearing age create significantly fewer jobs than male entrepreneurs.

Each of the impact assessment studies cited above, with one noted exception, provide evidence of positive impacts of microfinance. Other impact assessment studies, however, fail to find significant impacts. In his assessment of Thai MFIs, Coleman (1999) finds that "naive" estimates of impact failing to control for self-selection and endogenous (non-random) program placement significantly overestimate program impacts. He generalizes this finding to other impact assessments, arguing that most
impact studies neglect the issues of self-selection and endogenous program placement thus leading to systematic overstatement of impact.

Making comparisons across impact studies is greatly complicated by the contextual heterogeneity of programs assessed and the diversity of empirical methodologies used. The diversity of empirical methodologies in turn reflects the diversity in methodological options available. Hulme (2000) reviews the methodological options for doing impact assessments identifying three broad approaches: the scientific method (principally control-group surveys), the humanities tradition (ethnography and other qualitative methods), and participatory learning and action (participatory qualitative tools that include, for example, participatory rural appraisal, rapid rural appraisal, and farming systems research). He concludes that an optimal impact assessment mechanism should be a mix of the different methods for a fit between assessment objectives, program context, human resources, and timing.

Hyman (1998) also consider the issue of optimal impact assessment methods by reviewing and comparing four MFI evaluation systems. Through his analysis, he suggests improved methods for existing assessment approaches. Woller et al. (1999b) survey 73 MFIs in the US and developing countries on their impact evaluation practices. They find that the sampled institutions regularly evaluated their programs, albeit using inexpensive and unscientific methods, regularly monitored project performance, saw evaluations as vital, used findings to implement project changes, and sought formal feedback from clients. The survey findings also shed light on impediments to
performing impact assessments on the role played by various stakeholders in the evaluation process.

In addition to Coleman (1999, cited above), other studies address the various methodological weaknesses found in published impact studies. Karlan (2001) criticizes the common practice of omitting ex-clients from treatment groups, arguing that such an omission introduces significant risk of selection bias and survivorship bias, potentially resulting in systematic and significant overstatement of program impacts. Schreiner (2002) criticizes impact assessments of U.S. microenterprise development programs for a variety of methodological failures, including failure to use valid control groups, biased sampling, misestimating of program benefits and costs, and failure to perform true cost-benefit analyses. (Many of these criticisms are true for assessments of microfinance programs in the developing world as well.)

There are only a few papers available which provide some evidence on the possible attractiveness of microfinance for investors. The main examples are: Ahlin and Lin (2006), Gonzalez (2007), and Krauss and Walter (2008). These papers, using different versions of the Mix Market dataset, examine whether microfinance shows low sensitivity to the macro economy. Whereas Ahlin and Lin (2006), and Gonzalez (2007) empirically address the question of MFI resilience to domestic macroeconomic shocks, Krauss and Walter (2008) deal with domestic and international shocks. Ahlin and Lin (2006) use a sample of 112 MFIs from 48 countries for the years 1996-2004. By using within and between panel regressions, they examine whether performance of MFIs is affected by the macro economy. They focus on four
performance measures: self sustainability, default rates, costs per borrower, and growth in clientele. Concerning the macroeconomic variables, they use real per capita income growth rates, inflation, labor force participation rates, manufacturing’s share in GDP and net foreign direct investment as a fraction of GDP. Their study indicates that the macroeconomic environment is a significant determinant of MFI performance, which questions the relevance of investments in microfinance in order to reduce portfolio risk. However, they also show that MFI success is for a substantial part determined by MFI-specific factors.

Gonzalez (2007) analyzes whether changes in domestic GNI per capita significantly affect MFI portfolio risk, measured by four indicators: Portfolio at Risk over 30 days, Portfolio at Risk over 90 days, Loan loss Rate, and Write-off Ratio. His sample contains 639 MFIs in 88 countries for the period 1999-2006. By using fixed and random effects panel regressions, in which he controls for several variables that may affect portfolio risk, the study shows that only with respect to Portfolio at Risk over 30 days there exists a statistically significant relationship between changes in GNI per capita and portfolio risk of MFIs.

Regarding the other three indicators for portfolio risk, he finds no evidence for a relationship between MFI asset quality and changes in GNI per capita, suggesting that microfinance portfolios have high resilience to macroeconomic shocks. His study, therefore, provides some evidence that microfinance may provide attractive opportunities for portfolio diversification.
Krauss and Walter (2008) examine whether microfinance shows low correlation with international and domestic market performance measures. Their dataset contains annual data for the period 1998-2006. In total they consider 325 MFIs based in 66 emerging market countries. They use fixed-effects panel regressions to examine the relationship of MFI returns, measured by five key financial variables (return on equity, profit margin, change in total assets, change in gross loan portfolio and loan portfolio at risk), to global market risk – measured by the S&P 500, Morgan Stanley Capital International (MSCI) world, and MSCI Emerging Markets indexes and domestic market risk, measured by domestic GDP.

Krauss and Walter (2008) also perform regressions for a sample containing MFIs and emerging market institutions (EMIs), and MFIs and emerging market commercial banks (EMCBs). These regressions aim to show whether MFIs show lower or higher correlations with domestic and global market risk than EMIs or EMCBs. Their analysis shows that MFIs are not correlated with global market movements, whereas MFIs are significantly correlated with the domestic macro economy. Relative to EMIs and EMCBs, MFIs seem to be more detached from global capital markets. However, concerning the domestic markets, MFIs and the two benchmarks have comparable correlations. This leads Krauss and Walter (2008) to conclude that “MFIs may have useful diversification value for international portfolio investors away from country risk exposures. For emerging market domestic investors, who may have this ability to a much more limited extent, domestic microfinance investments do not seem to provide significant portfolio diversification advantages” (Krauss and Walter, 2008).
Apart from the correlation argument, another straightforward argument in favor of adding microfinance to a portfolio is that microfinance can offer investors a high return for only little risk. However, there are large performance differences between MFIs. Stephens and Tazi (2006), for instance, show that return on assets performance differs substantially between regions. While Latin American and Eastern European and Central Asian MFI’s perform quite well, Southern Africa and South Asian MFI’s perform worse. In addition, performance seems to differ between types of MFIs, e.g. commercially oriented banks perform better than aid oriented Non-Governmental Organizations (NGOs).

Microfinance has finally been recognized by the developed world by honoring, Dr. Mohammad Yunus of Bangladesh with Nobel Peace prize for the year 2006. Dr. Yunus pioneering work setting up the Grameen Bank in Bangladesh has been the source of inspiration for economist’s researchers working in the area of micro finance the world over. Dr. Yunus on being given the news of the Nobel Prize Quoted that “peace comes only through poverty alleviation”. Grameen Bank Bangladesh is to winner of the Noble prize for peace in 2006. The Bank has women as 94% of its patrons who display a repayment rate of 98% in India, too the story is no different. It is therefore appropriate that in book of readings on Micro finance, we have given adequate coverage to empowering women through microfinance.

The declaration of microfinance summit held in Washington DC in 1997 defined micro finance programs at those “extending small loans to poor people for self employment projects that generate income allowing them to
care for themselves and their families” the declaration also stated that, “in most cases, microfinance projects offer a combination of services and resources to their clients in addition to credit for self employment. These often include saving facilities, training, networking and peer support”. (Microfinance Summit 1997).

“Microfinance and the empowerment of women A review of the key Issues” is by Linda Mayoux. This article discusses the key issues like the possibility of sustainable microfinance Programmes with special emphasis on women and their limitations. It explains the basic linkage between microfinance and women’s empowerment. The author aims to clarify these issues within the context of the debate about the gender mainstreaming. It concludes that women’s empowerment needs to be an integral part of policies. Empowerment cannot be assumed to be an automatic outcome of microfinance programmers, where designed for financial sustainability of poverty targeting.

“Commercialization of Microfinance” is by Anasbad Bharti Harsh Bhargava and Aparna Bellar. The article explains in detail the commercialization of microfinance features and models of microfinance commercialization and the challenges to commercialization, some of the major challenges facing the issue of commercialization are policy environment, inadequate financial structure, and limited retail level institutional capacity, inadequate investment in agriculture and rural development and inadequate investment in social intermediation. The authors conclude that there are some other very
successful models available from other countries, which can be replicated in India as well.

“Implementation Issues for Microfinance Institutions” is by Abbinava Mishra and Harsh Bhagavat. In this article, an attempt has been made to study the role of marketing in enhancing the performance of microfinance institutions, (MFIs) applicability of mainstream marketing concepts in the microfinance sector, suggesting marketing strategy for the MFIs in the developing countries, the impact of regulations and budget decisions on the marketing strategy as well as the industry whole. This article has briefly analyzed some of the success stories of MFIs in India and overseas for drawing lessons from them. The article also speaks about the role of the microfinance in improvement of economy of developing countries and social upliftment.

Rural India remains inadequately serviced with regard to both chancing savings and extending credit, despite multi agency approach. Financial exclusion of vast ruralities is a cause of concern. An RBI committee has gone into this question and submitted its report. It recommends the microfinance route through self help groups. With two models namely business facilitator model and business correspondent model. There are many issues in this regard and the article “Rural Credit and Microfinance” what RBI Internal Group report says by Katuri Nagesivart Rro. addresses all these issues, like identifying and accepting the facilitators and correspondents, risk mitigation strategies, rating of the correspondents, due diligence, prescription of compensation package etc.
In “Transaction Costs of Self help Groups: A study of NABARD’s SHG Banking programme in India” is by Stefan Karduck and Hans Dieter Seibel. The main aim of article is to ascertain the suitability of the SHGs banking approach. The article provides a methodology that can be used in more representative and local samples. The study has shown that transaction costs of a non representative sample of 78 SHGs and their 1160 members are low and decrease rapidly with increasing loan volumes, the study concludes that while there is no urgency to intervene, in the interest of overall efficiency, the TC of the SHGs can, and should be further reduced by simplifying and standardizing the report loan process for groups with a good track record. It has been observed that the relatively smooth process bank linkages are being disturbed by the easy money of new government supported subsidy programs. Rapid increased in internal funds to totally unregulated and unsupervised SHGs with wholly inadequate and intransparent book keeping practices requires immediate action, presumably at a moderate cost.

4.6 Microfinance and Credit Scoring

Researchers used the technique of credit scoring in a similar context as Duran (1941) used it in USA after the Great Depression. The concept did a full cycle to return to the origins of the problem of granting loans at lesser cost to (micro) borrowers.

As Mark Schreiner noted in his cornerstone paper “Credit Scoring for Microfinance: Can It Work?” published in 2000, credit scoring for microfinance can work. The difference is in the information, which is usually qualitative and informal. The new challenge of credit scoring is
incorporating and adapting to this constraint. Neither Durand nor other scholars treated the topic of using informal data for credit scoring purposes.

Unfortunately, in many countries around the world, even amongst the rich, the informal and semi-formal sector represents an important share of the GDP. There are lots of people behind this economy that need financial services. Microfinance is a fair answer to a large majority of these needs.

Although “credit scoring is one of the most important uses of technology that may affect microfinance” (Rhyne and Christen, 1999), we need to redefine the conceptual framework of credit scoring to allow its full application to micro lending. The development of the framework will serve as a guide for practitioners in applying efficiently credit scoring in microfinance. Credit scoring doesn’t have to be rediscovered, but adjusted and promoted in order to cut transaction costs and make the credit available to the excluded as long as the credit risk can be measured and controlled.

The concept of information asymmetry pioneered by Stieglitz has a particular connotation in micro lending. Statistics have a major role to play in reducing the information gap as have on-ground investigations. Who thought before that the opinion of a neighbor of the applicant for a micro loan can be strongly correlated with his credit behavior? Such qualitative information can now be harnessed and incorporated in a credit scoring algorithm.
The early 1970s saw the industry of credit scoring growing. FICO started collaboration with Wells Fargo – major financial institutions in the US. The credit scoring provider already was planning to export the technique to Europe (Fair Isaac Corporation, 2010). Increasing number of academics approached different practical and concrete topics related to the scoring technique. Emphasis is put on costs and net present value of loan repayments (Edmister and Schlarbaum, 1974), but also on best statistical techniques to be used and a better definition of good and bad risks. The role of credit bureaus in helping identify bad credit risks is mentioned. Some serious works are focused on low income populations.

Muchinsky (1975) finds that two dimensions of the borrower's repayment behavior are critical to its classification by the lender as good or bad credit risk. One is obviously the delinquency and the second: the anticipated repayment of a loan. The fact that the borrower reimburses the loan prematurely is susceptible of making the account unprofitable as interest margin perceived only for a short period doesn’t cover transaction costs. This perspective enriches the perception of bad clients.

The efforts to use the scoring technique to facilitate extension of credit to low income clients indicate a certain maturity of the concept of credit scoring in the US. Certainly, the Consumer Credit Protection Act (CCPA) of 1968 had a major role in regulating the industry. The Equal Credit Opportunity Act of 1974 had also notable implications. Including its 1976 amendments, this Law prohibited discrimination in the granting of credit mainly on the basis of race, religion, sex, marital status and age. These
ethical concerns were formalized within the legal framework and in this way adjusted the conceptual framework of credit scoring in USA.

Even if many countries are not concerned by such limitations, ethical and sound selection of variables predicting the credit risk is a rule that seems to be obeyed in part by the practitioners. Gender and marital status as exceptions are often used in credit scoring formulae designed to score low-income populations in the virtue of “positive discrimination”. In microfinance, women in spite of proven better credit behavior are more often refused access to credit (D'Espallier, Guérin and Mersland, 2009). Divorced women experience even stronger exclusion. If a scoring formula can help increase the chances of excluded female borrowers to get loans while improving the quality of the portfolio, then many might be seduced by such opportunity.

The US National Commission on Consumer Finance created by the same CCPA ordered a research to determine the feasibility of a credit scoring system applicable to low income consumers. The conclusion was negative indicating that variables most likely to discriminate credit risk of low-income consumers are presently excluded from standard loan application forms (National Commission on Consumer Finance, 1972). Joan Tabor and Jean Bowers (1977) conclude that credit scoring should be re-designed to be employed efficiently in evaluating credit quality of low income consumers. Establishment of household financial consultants is suggested – an idea that certainly doesn’t contribute to the initiative of lowering transaction costs.
Donald Sexton (1975), on the contrary, found that only few variables with credit risk predictive power differed between high-income and low-income households and thus could not make the conclusion that different procedures are required for high- and low-income populations. We believe that this issue is reduced to the question of homogeneity of populations, and low income borrowers, except the income, may be different in many aspects. For the conceptual framework we note that it is possible that low-income customers have different credit behavior habits that may be considered separately. It is important to mention that in the effort of extending credit in a sustainable manner to poor US borrowers new techniques of cost reduction like credit scoring were seriously considered.

The “in-house knowhow” character of credit scoring systems used by the financial institutions represented an increasing problem for the scholars, who found it difficult to relate and research on how well the industry incorporated new tendencies and legal requirements into practice. The new regulation required statistically sound scoring systems be constructed using empirical methodologies, but no precise standards were imposed. The hypothetical obligation to demonstrate the soundness of a scoring system in Court made the scholars focus on different technical aspects and assumptions that were ignored, as long as the model was showing evidence of credit risk discrimination on the hold-out sample or in practice.

In the absence of case studies, Robert Eisenbeis (1978) analyzed the credit scoring systems developed by academics at that time, hoping that these were reflecting the systems in use by lenders. Since the majority of models were
developed using discriminate analysis, he pointed out statistical problems the technique had and warned the public on the inherent risks.

With the apparition of credit bureaus selling information on past credit performance, the cost of extra information was considered in different credit granting schemes (Eisenbeis, 1978). For the conceptual framework of credit scoring, such considerations foresaw new enhancements. If a scoring formula predicts the credit risk accurately using few variables, why pay for extra information? On the contrary, for the loans in the “grey area”, at the limit of the cut-off, if additional information can help discriminate better, extra costs are clearly justified. Can one scoring formula accommodate such features?

James Ang, Jess Chua and Clinton Bowling (1979) were amongst the first to build a non-parametric credit scoring system. They applied the decision tree technique to a credit scoring related problem. The result is not a scoring formula as before, but an algorithm represented by a tree-like scheme. The characteristics of the scored subject guide the user through the nodes and branches of the tree till the estimated bad or good class of the applicant is determined.

The use of “automatic interaction detector analysis” showed that the relationships between late payments and some borrower variables are nonlinear. (Ang, Chua and Bowling, 1979). By consequence, linear credit scoring models may not be always appropriate. Since this technique remains to be a multivariate analysis, the conceptual framework doesn’t change. We
will note however that besides the discriminate analysis which was applied first by Durand (1941) to the loan screening question and since, extensively used by academics, and the regression analysis, that started being popular by the end of the 1970s, other non-parametric techniques belonging to the multivariate analysis may be used in identifying good and bad credit risks.

We conclude that by the end of 1970s, credit scoring was a recognized industry. The concept found its first use in Europe, implemented by FICO in a bank in 1977 (Fair Isaac Corporation, 2010). The company by that time delivered approximately 500 systems to approximately 200 customers, including about half of the 50 largest US banks and 20 US finance companies, according to the testimony of William Fair - that time head of FICO, in front of a Senate Commission (U.S. Senate, 1979).

The framework of credit scoring entered its modern times. From this perspective it’s hard to imagine that the concept of credit scoring will change significantly.