

RECENT DEVELOPMENTS IN MICROFINANCE AND BEYOND

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ABSTRACT

This paper surveys recent research on microfinance and suggests directions for future research. New empirical evidence has emerged, and new theoretical models have resolved some issues. The paper selectively examines recent findings, particularly theoretical and empirical works that deal with the financial and social goals that microcredit must fulfill to provide long-term sustainable poverty reduction. Finally, some issues for which new research is needed are identified.

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1. INTRODUCTION

The investment by for- and not-for-profit institutions in microfinance¹ institutions (MFIs), intended to launch and to spur the growth of microenterprises, attests to the adaptability of financial economics and development finance systems. Microfinance funders entrust money to MFI managers, who do not commit any of their own money to the MFI. Through loan officers, MFI managers grant money to micro-enterprises run by micro-entrepreneurs whose skills and future efforts are both unknown. MFIs not only issue microcredit to these micro-entrepreneurs, but they also spend weeks providing business coaching and training to increase productivity, along with organizational support and programs to raise awareness and empower the poor.

The very existence of microfinance is a notable achievement of modern development finance. Owing to the exceedingly challenging nature of the problems encountered in microcredit investing, the substantial financial risk, the severe hidden action and hidden characteristics, and the remarkable financial and poverty alleviation opportunities, microfinance provides a superb testing ground for financial economics and development finance theories. Specifically, the investigation of risk management, financial structure, relational and financial mechanism design, regulation, inclusive finance, and impact evaluation in microfinance can shed light on whether the targeted individuals, groups or communities are benefiting from the program rather than from other factors. A good understanding of these issues undoubtedly is relevant for policy makers in designing future policy intervention.

Nonetheless, relatively little has been published on these intriguing issues in microfinance in the leading financial economics and development finance journals. The main reason for this is that the theoretical problems are complex and multi-faceted. Second, comprehensive empirical analysis has been hindered by the paucity of good data. Yet significant progress has recently been made toward understanding the problems that undermine the development of microfinance, notably driven by the emergence of theories and databases.

¹ Microfinance refers to the offering of a large array of financial products and services such as savings, credit, payment services, money transfer and insurance to the poor, to low income households and to microenterprises excluded from the classic financial system (Sharma, 2001)

The objective of this paper is to review the progress of theoretical and empirical research in microfinance by documenting the most recent developments and results of investigations conducted around the world. We can thus identify new lines of research in the field of microfinance.

This paper does not survey all published work on microfinance exhaustively. Rather, two recent papers collectively provide a comprehensive overview of the field. First, Brau and Woller (2004) and Khawari (2004) address the issues of MFI sustainability, products and services, management practices, clientele targeting, regulation and policy, and impact assessment. The two papers contain about 200 references on microfinance. In addition, Aghion and Morduch (2005) present an updated analysis of the economics of microfinance, intended to bridge the gap between the existing academic literature and practitioners' view. More recently Cull, Demirgüç-Kunt, and Morduch (2009a) provide an overview of the economic logic behind microfinance institutions and describe how the movement from socially oriented non-profit microfinance institutions to for-profit microfinance has occurred. They also discuss some of the unanswered questions about the role of commercialization in microfinance.

Microfinance institutions have proliferated in the last twenty years.

They serve low income households through mechanisms and instruments not used by commercial banks (Khawari, 2004; Brau and Woller, 2004), notably without requiring guarantees. Morduch (1999) asserts that microfinance has raised the hope of greatly reducing poverty and that the trade-off between financial performance and scope (largely serving the poorest members of the population) is not insurmountable (Hermes and Lensik, 2007). Accordingly, MFIs have adopted three main objectives: i) offer products and services to the largest possible marginalized segment of the population (scope); ii) achieve financial viability (capacity to cover all expenses through income from their operations and mobilization of savings for self-financing); iii) contribute to reducing poverty and fostering human development in the target communities (Sharma, 2001).

Because the provision of financial services is costly, the microfinance sector has had to turn to innovations in financial technologies and institutional organization to reduce costs and create an offering that meets the demand of a poor clientele for quality financial products and services (Gonzalez-Vega, 1998). Solutions include putting in place a regulatory and oversight framework (Shankar and Asher, 2010; Cull, Demirgüç-Kunt and Morduch 2009b) and the use of new technologies that facilitate the integration of microfinance in an inclusive financial sector (Rhyne, 2009). MFIs must also adopt risk management practices to ensure their financial self-sufficiency and a large enough scope to enhance the well-being of the target populations (Arvelo et al, 2008; Ayayi, 2009). Critical analysis of innovations considered as pivotal to the success of microfinance, such as the group loan contract with joint guarantee, is needed, as are new attitudes to subsidies, dynamic incentives, regular repayment programs and replacement of guarantees with pressure to maintain a high repayment rate (Morduch, 1999).

The cash cow nature of the successful MFIs for their investors coupled with the relative improvement in social welfare for these MFIs' clients have generated the proliferation of MFIs. For example, over the last 15 years, the number of MFIs that reported to MixMarket,² a database that compiles information on MFIs, has grown from about 600 MFIs from September 1997 to 1300 MFIs in October 2007 to 1983 MFIs in July 2011, which represents growth of 230% over the period. This exponential growth is corroborated by the gross loan portfolio, which grew at an increasing rate of 442.5% from \$12 billion in 2007 to \$65.1 billion in 2011. The total assets of MFIs grew 7.6 times between 1998 and 2006, from \$3,220.12 million to \$24,501.86 million, with average assets increasing by 15% from \$31.57 million to \$36.35 million. The financial performance of MFIs over the period from 1998 to 2006 appears to have improved: they generated annual returns of about 4.23%³ on their assets. Their average net income increased more than seven-fold. Median operational self-sufficiency rose from 107.01% in 1998 to 115.39% in 2006.

The rest of the paper is structured as follows: Section 2 looks at supply and demand in microfinance. Section 3 covers financial self-sufficiency and the scope of MFIs. Section 4 deals with contracts: individual versus group loans. Section 5 discusses inclusive finance. Section 6 analyzes the credit risks of MFIs, and Section 7 addresses regulation and oversight of MFIs. Section 8 describes microfinance products. Section 9 describes the social impact of microfinance and Section 10 concludes the paper and provides directions for future research.

² All the data used to provide the evolution of the different indicators are from MixMarket (www.mixmarket.org).

³ Geometric mean of annual returns over nine years.

2. SUPPLY AND DEMAND IN MICROFINANCE

Approaches toward assessing demand for microfinance products and services diverge considerably. Ayayi and Yusupov (2008b)⁴ propose a methodology to assess potential demand for and optimal supply of entrepreneurial microcredit. They show that total demand for microcredit is the sum of demand from active poor and from a person that motivates poor people who are able to carry out income-generating activities but who are not in the workforce. Ayayi and Yusupov conclude that potential demand satisfied by an MFI depends on its objectives, namely whether it has a social orientation or if, conversely, its main goal is to maximize profits.

Nonetheless, Anand and Rosenberg (2008) contend that demand for microcredit is consistently underestimated. The authors assert that most estimates of the demand for microcredit look at the total amount of funds required: the number of active borrowers is multiplied by the average loan amount to arrive at the demand estimate. They contend that basing the estimate of the number of micro-entrepreneurs on the total population is problematic for two main reasons: i) some poor people are too young or old to apply for and repay loans; ii) some people do not have enough income to repay loans., Anand and Rosenberg thus argue that demand has been over-estimated because: i) many people do not want microcredit; ii) others that want microcredit are not solvent; and iii) some poor that want and are qualified for microcredit do not necessarily obtain it.⁵

These analyses are corroborated by Karlan, Morduch and Mullainathan (2010), who find that most often, less than half of eligible households participate in microfinance programs effectively. Rather, they turn to informal moneylenders. The researchers add that in developing countries, people mainly rely on friends and relatives for funding. For Karlan, Morduch and Mullainathan (2010), this indicates that current supply and demand for microfinance products must not be considered realistic, particularly owing to the low *take-up* rates of microfinance.

Salazar, Bogan and Turvey (2010) studied MFIs in the Dominican Republic and conclude that contrary to what many theoretical models claim, demand for microcredit is elastic. Nonetheless, they underline that the elasticity of customers' demand is not homogeneous; it is correlated with certain characteristics. They argue that overly high interest rates⁶ tend to trigger a sharp drop in demand because many poor are consequently excluded from the microfinance market.

Ayayi and Yusupov (2008a) demonstrate that the supply of microfinance products and services is unequally distributed around the world. They find that 82% of \$27 billion in loans were granted in three regions, namely Latin America and the Caribbean (LAC), East Asia and the Pacific (EAP) and countries in the former Soviet Union (Eastern Europe and Central Asia (EEAC)).

However, Jayo, Gonzales and Conzett, (2010)⁷ and the MIX and CGAP⁸ (2008) reports indicate that the microfinance sector is dynamic and continues to grow in Europe and Africa. The sector remains diversified

⁴ They find that the potential annual demand of the entrepreneurial microcredit clients in France is situated between 131,000 and 251,000.

⁵ Anand and Rosenberg (2008) give the example of Bangladesh, where government microfinance programs and MFIs have 23.8 million customers, only 2/3 of which are active borrowers. Similarly, among the four largest MFIs in the country (Grameen, BRAC, ASA, and Proshika), only five out of six of the members have active loans. Among the other NGOs, 2/3 of members have active accounts. Similarly, the 2006 World Bank report states that only 62% of poor families in Bangladesh were using microcredit.

⁶ They report that annual interest rates of MFIs have increased to 85% and appear to be prohibitive compared with the market rates of economies in developed countries (Rosenberg et al, 2009).

⁷ The study examined 170 actors in microfinance in 21 of the 27 EU candidate countries, Croatia and countries belonging to the European free trade zone in 2008 and 2009. The study considered the commonly accepted definition of microcredit in Europe, namely loans of 25,000 euros or less given to micro-enterprises for businesses with nine or fewer employees. The researchers found that the amount of microcredit distributed decreased by 7% from 2008 to 2009. This result contrasts with the increases of 14% in 2005 to 2006 and 2004 to 2005, and 11% from 2003 to 2004. This situation can be explained by the financial crisis of 2008 and the fact that MFIs seem to be more interested in the quality of the portfolio than its growth.

⁸ MIX and CGAP (2008) analyzed and benchmarked microfinance in Africa. They found that in 2007, the 161 MFIs that participated in the study had 5.2 million borrowers and 9 million savers. Total credit distributed exceeded US \$2.5 billion, whereas global savings exceeded \$2.1 billion. Regarding financing, the report notes a global commitment of \$1.6 billion covering 716 projects and 48 countries in sub-Saharan Africa.

even if many lenders continue to use microcredit as a tool to promote micro-enterprise, job creation and financial and social inclusion.

Therefore, microfinance should be considered an essential tool to counter inequality and social exclusion worldwide, including in developed countries.

3. FINANCIAL SELF-SUFFICIENCY AND SCOPE OF MFIS

Hermes and Lensik (2007) maintain that microfinance has recently attracted considerable attention among both political decision makers and academia. The question of whether there is a tradeoff between financial self-sufficiency and scope has created a schism among MFI stakeholders (Morduch, 2000) and has stoked a heated debate.

The first camp consists of proponents of the “institutionist” or “financial systems” approach to microfinance, which has gradually become dominant at the World Bank and in the donor community (Ayayi and Sène 2010; Khairy, 2004; Morduch, 2000; Conning, 1999; Yaro, Benjamin and Charitonenco, 1998). The opposing camp is made up of advocates of the “welfarist” approach, who consider subsidies indispensable for reaching the poorest of the poor (Pollinger, Outhwaite and Guzman 2007; Morduch, 1998 Hulme and Mosley, 1996). A third stream has emerged, which attempts to reconcile these antagonistic camps by arguing that it is quite possible to achieve good scope and financial viability simultaneously (Cull, Demirgüç-Kunt and Morduch, 2007; Schreiner, 2003).

The “*institutionist*” approach urges MFIs to aggressively seek financial viability by increasing interest rates and lowering the costs of service provision. Accordingly, when MFIs agree to forgo donations and subsidies and apply bank practices instead, they are obliged to innovate and decrease their costs. Thus, MFIs that apply the best commercial banking practices would automatically attain the objective of reducing or eradicating poverty: a win-win proposition (Morduch, 2000). “*Institutionists*” consider profits as not only acceptable but indeed essential because they can attract private investors to the sector, thus expanding the scope of MFIs. Accordingly, MFIs that reject or avoid subsidies will attain a broader scope and can thus better serve the target populations because they are free of donor-imposed constraints (Khairy, 2004).

Ayayi and Sene (2010)⁹ identify the factors that determine the financial viability of MFIs. They show that a very high quality portfolio coupled with the application of interest rates that allow a reasonable profit and rigorous management play determining roles in helping MFIs attain financial viability. To this end, MFIs must put in place strategies and governance structures and apply best banking practices (by avoiding a slide toward commercialism).

In the same vein, Yaro, Benjamin and Charitonenco (1998)¹⁰ underline that rural microfinance can be profitable when reliance on subsidies to provide financial products and services is reduced sharply or eliminated entirely.

In contrast, defenders of the “welfarist” or poverty approach militate for the attainment of the largest possible scope rather than a feverish quest for viability. They emphasize that exaggerated insistence on covering expenses and eliminating subsidies obliges MFIs to exclude the poorest from the borrower portfolios because they are the most difficult and costly to reach (Hulme and Mosley, 1996). Similarly, this approach states that most poor people cannot repay their loans when interest rates are dictated by the need to cover all expenses. “Welfarists” assert that society would need to conserve subsidized MFIs because they are able to target and positively affect the means of subsistence of very poor households (Morduch, 1998). For some NGOs, adoption of a financial system approach would divert the energy and attention of actors from important political and social objectives such as empowerment of the poorest and most vulnerable members of the population (Conning, 1999).

Similarly, Pollinger, Outhwaite and Guzman (2007)¹¹ find that American MFIs need to raise additional funds each year from donations and other sources to make their operations viable, and that few MFIs are able to

⁹ Their study examined 217 MFIs in 101 countries between 1998 and 2006.

¹⁰ They gave the example of BRI's Unit Desas that developed an efficient approach to rural financial intermediation based on adequate incentives, appropriate pricing of financial services, adapted interest rates, financial discipline and a scope extended to the entire rural population.

survive uniquely on the income generated by their operations. Demirgüç-Kunt and Morduch (2007)¹² argue that is possible for MFIs to generate profits while serving the poor. Cull, Demirgüç-Kunt and Morduch (2007) note that attaining the dual objective of financial viability and a broad reach depends on the loan methodology employed.

Lastly, Schreiner (2003) reports that the Grameen Bank reconciles the subsidy approach and the market approach to microfinance because it is subsidized permanently and is almost profitable, while still serving the poorest members of the population. Grameen Bank has thus succeeded by understanding that efficiency is not incompatible with its social mission, and that helping the poor is not an excuse to avoid profit seeking. Instead of channeling the subsidies¹³ into bonuses for employees, the bank used the funds to finance growth and keep the costs of its loans very low. Schreiner concludes that Grameen Bank can set low prices to reach the very poor, but keep them high enough to approach profitability.

4. INDIVIDUAL VERSUS GROUP LOANS

The second most important research question concerning microfinance actors is the group solidary loan and its consequences on reducing information asymmetry, compared with the individual loan methodology (Hermes and Lensink, 2007). In the literature, defenders of group loans appear to largely prevail, even if some researchers underline the shortcomings of this form of credit. Further, the question of the individual loan is rarely treated in isolation in the microfinance literature. This may be because the group loan is considered a major innovation relative to classic bank practices. Thus, individual loans are mentioned solely in opposition to group loans. Several camps are fueling this debate.

Advocates of groups loans include Ghatak and Guinnane (1999) and Morduch (1999), who show how group solidary loans can facilitate analysis of loan files, monitoring, auditing and execution of repayment. They argue that group loans allow unconventional loan institutions such as Grameen Bank to attain reasonable financial self-sufficiency and significantly higher repayment rates compared with conventional lenders that issue individual loans.

Similarly, dynamic incentives, sequential loans and conditional renewals, formation of homogeneous groups (allowing control of all borrowers and partially excluding some bad borrowers) are determinants of group performance (Chowdhury, 2007; Casar, Crowley and Wydick, 2007). Casar, Crowley and Wydick (2007) assert that the closer the residences of the members, the higher the group's likelihood of success. In the same vein, Ayayi (2009) underlines that, joint-liability contracts have the advantage of increasing access to financial services for people whose only collateral is their moral guarantee founded on faith in a group or trust in the individual and the financial viability of the entrepreneur's project.

Further, the group solidary loan eases access to credit for the disadvantaged, but also ensures social cohesion in the rural world and in populations in general (Bhatt and Tang, 1998). Similarly, to avoid post-contractual opportunism (moral hazard) joint liability allows mutual monitoring and peer pressure that oblige borrowers to honor the terms of the contract (Stiglitz, 1990; Besley and Coate, 1995, Diagne, 1998). Joint liability also facilitates the selection of efficient projects (Stiglitz, 1990; Aghion, 1999). Customers are aware that if only one of the members defaults, the group may not receive future loans. In addition, Hoff and Stiglitz (1990) argue that all borrowers in groups hold all information on the members of their groups and on the credit market, an essential success factor.

Thus, the literature review above indicates that group solidary loans can address four major problems that MFIs face, namely: i) establishing the type of potential risk that the borrower represents (adverse selection); ii) ensuring that the borrower will use microcredit wisely (moral hazard); iii) internal financial management and iv) finding methods that oblige reticent borrowers to repay loans (Ghatak and Guinnane, 1999).

¹¹ Pollinger, Outhwaite and Guzman (2007) studied financing based on relations maintained by MFIs in the US to solve the difficulties of microenterprises accessing credit. They note that credit is awarded to micro-entrepreneurs at subsidized rates.

¹² They use financial data of exceptional quality concerning 124 MFIs in 49 countries. They thus explore the concepts of profitability, loan repayment and cost reduction.

¹³ Schreiner (2003) reports that between 1983 and 1997, subsidies per person and per year of each member were \$20, compared with the average subsidy of \$0.22 in the sector. Each member thus had a surplus of \$20 each year, which means that Grameen Bank was socially profitable.

Nonetheless, this positive picture of the effectiveness and advantages of group solidary loans has been countered by many researchers, who pointed out shortcomings and gaps in this credit approach. For instance, Aghion and Morduch (1998) underline that many studies have focused on solidary loans extended by institutions such as Grameen Bank, while overlooking other aspects of their programs such as direct monitoring of the borrower by the lender, which also provides good repayment rates. Chowdhury (2007) affirms that the formation of non-homogeneous groups can have a strong negative impact on credit activity. He gives the example of Grameen Bank, where loans are first awarded to two of the five members of a group; the other members are penalized if the first members fail to repay the loan. These results are consistent with those of Wydick (1999), who finds that the more solid the social ties, the lower the threat of social sanctions, and of Ahlin and Townsend (2007), who conclude that social ties can hinder repayment of group loans. Hermès, Lensink and Mehrteab (2006) assert that group monitoring does not have a significant positive impact on performance of group repayment. These shortcomings are confirmed by credit agents in Asia and Latin America, who argue that there is no reason to sanction someone because of someone else's fault (Aghion and Morduch, 2005)

Similarly, Diagne (1998) and Besley and Coate (1995) raise the possibility of strategic default within groups, that is deliberate refusal by the borrower to repay the credit despite the success of the project. Diagne (1998) contends that it is mainly imperfect information among members of the group that causes strategic default. He maintains that unwillingness to repay debt is the main cause of default in group loans, rather than financial difficulties. This fact was corroborated by Besley and Coate (1995), who provide evidence of the negative effects of joint liability. They find that some members are unwilling to fill in for a partner in default, which leads to the failure of the group, and hence its ability to obtain future credit.

Aghion and Morduch (2000) criticize the focus on group loans. Rather, they endorse individual loans combined with mechanisms such as direct loan monitoring, sequential loans and the use of the non-refinancing threat. These mechanisms, they argue, would allow MFIs to successfully penetrate new segments of the microcredit market, and generate very high repayment rates by lending to low income borrowers that cannot provide a guarantee, without having to rely on group loan contracts with a solidary clause. The researchers give the example of pioneers in this area such as Grameen Bank and BancoSol, which abandoned group loans for their more affluent customers with well-established activities. These pioneers have turned to individual contracts (borrower-lender), which have gradually come to represent the dominant practice in microfinance. Aghion and Morduch add that the success of group loans depends largely on mechanisms that underlie individual loan programs.

These developments and divergences noted in the literature underscore the need for MFIs to tailor their approach to the target clientele and their specific conditions, while not ruling out the possibility of offering either group loans or individual loans, in line with the clients' needs.

5. INCLUSIVE FINANCE

Inclusive finance is defined by the United Nations as a set of financial institutions that offer appropriate financial products and services to all segments of the population (Rhyne 2009). Rhyne asserts that inclusive finance marks a new phase in the efforts to provide financial services to the poor based on microfinance. This idea is supported by Ayayi (2013), who demonstrates that an economy in which banks downscale to offer microfinance products and services, while MFIs upscale to serve a more affluent clientele, would foster a dynamic microfinance sector. In this framework, the private sector (bankers, investors, technical support firms) must therefore practice inclusive finance by investing in specialized institutions like MFIs. The private sector can help satisfy the need for new products, develop innovative channels to deliver financial products and services, and apply technologies to lower costs to reach the poorest segment of the population (Rhyne, 2009).

Accordingly, the private sector can earn a profit over the short and long term by engaging in inclusive finance and can learn much by finding creative solutions therein that can be applied to other domains. However, the private sector must first understand clients, the market and opportunities (Rhyne, 2009). Westley (2007) reaches the same conclusion for private banks. He argues that these banks can simultaneously issue dividends to shareholders while providing financial products and services to an underprivileged clientele and thus attain robust social performance.

Similarly, Pereira (2010) contends that commercial banks are very well positioned to face the untapped demand among micro-entrepreneurs and poor households for quality products and services. Banks have a very large capacity to deliver microfinance services given their inherent advantages that include: i) a very large agency network; ii) well established back-office systems; iii) very substantial capital; iv) easy access to lendable funds;

v) a private ownership system (that favors good governance and an efficient service offering); vi) controls by the regulatory authorities (central bank); vii) the possibility of collecting savings and offering credit and other financial services. This is why the failure of some downscaling operations represents a waste of resources and opportunities that good practices could offset (Westley, 2007).

Rhyne (2009) underscores that alternative specialized institutions such as MFIs, cooperatives, consumer credit financing companies and the “people’s bank” sector have made enormous progress by serving the poorest segment of the population. In the same vein, Ayayi (2013) asserts that banks are increasingly attracted to microfinance, for several reasons: i) very high repayment rates coupled with real profit opportunities; ii) fierce competition on the banking market; iii) better dissemination of technological innovations in finance around the world (which reduces the costs and risks of microcredit); iv) the quest for a new positive brand image to appease virulent criticism of their astronomical profits by the press and anti-poverty groups (social responsibility).

Another element that seems to attract financial institutions to microfinance, together with many investors, is the apparent low correlation between MFIs and financial markets. Klauss and Walter (2006) report a weak correlation between microfinance and domestic and international market movements. This creates a surplus of liquidity that the microfinance industry requires to grow. The industry is consequently attractive to investors who seek to diversify their portfolios.

Nonetheless, Westley (2007) underlines that even if banks are entering the microfinance sector in growing numbers; they continue to make many mistakes in their attempts to serve micro-enterprises. The author notes that banks continue to suffer from the revolving door syndrome. In other words, banks enter microfinance very hopefully yet emerge disenchanted after only a few years because they have lost money or made meager profits despite their efforts. There are two main causes of this syndrome: i) technical failure of the banks, many of which do not understand microfinance and how to practice it profitably; ii) failure resulting from a lack of engagement in microfinance, necessitating many actions related to promotion marketing and learning that are required to spur the growth of the microfinance portfolio and permit it to have a considerable impact on all banking results.

Lastly, inclusive finance should allow companies to face major challenges of reducing costs of small dispersed transactions and risk management, to build the industry (Rhyne, 2009). For Mendoza and Vick (2008), however, the challenge of improving access to diversified financial products and services remains. These authors assert that the private and public sectors have crucial roles to play in continuing the dynamism and expansion of the microfinance industry in an inclusive financial sector (the private sector as a source of products and innovation of processes, and the public sector as an engine of market development).

6. ANALYSIS OF CREDIT RISK OF MFIs¹⁴

The first notable finding is that few studies have explored this theme in microfinance. As a result, the subject is scantily covered in the microfinance literature. However, Arvelo et al (2008) have developed an approach specifically tailored to microfinance sector. This methodology draws upon the works of major pioneers in microfinance rating such, Planet Finance rating, MicroRate, M-CRIL, CRISL as well as key industry players like ACCION, CAMEL. This approach which highlights seven factors to consider when assessing the credit risk of MFIs can be categorized in quantitative and qualitative credit risk assessment. The quantitative factors encompass three criteria: the loan portfolio; profitability, sustainability and operating efficiency; and asset-liability management. As for the qualitative credit risk assessment tool; it includes management and strategy; systems and reporting; operating procedures and internal controls; and growth potential.

Ayayi (2012) builds on Arvelo et al (2008) approach by adding a digital scale that can convert both qualitative and quantitative risk factors to obtain an integrated comparative analysis of the credit risk of MFIs. In this regard, Ayayi (2011) points out that the integrated comparative analysis has set the stage for a meticulous analysis that will enable donors and investors to make sound decisions when providing funds to MFIs to help feed poor households and assist micro-entrepreneurs in the fight against poverty. Furthermore, Ayayi (2009) contends that in the face of the scarcity of available funds and the continually increasing demand for money from MFIs; the integrated comparative analysis will help MFIs’ management teams to evaluate their institutions’ performance in order to identify and correct weaknesses.

¹⁴ This section is mainly based on Arvelo et al. (2008) and Ayayi (2012) because these two papers are the only ones that delve into MFI’s credit risk assessment .

1 Quantitative credit risk assessment criteria

The first criterion in the quantitative credit risk analysis is the MFI's loan portfolio. It comprises the portfolio at risk, write-offs, portfolio size and provision for losses. Of the four indicators, the portfolio at risk, particularly the 30-day portfolio at risk, is most important. It allows the monitoring of credit risk of the outstanding portfolio of an MFI to avoid unexpected losses (Ayayi 2012). Additionally, it is an objective measure of early indications of default problems, at least in terms of timing (Ahlin, *et al.*, (2010)), which allows investors to better understand the performance and sustainability of the MFI. Simply put, the portfolio at risk > 30 reflects the true risk of a delinquency problem because it considers the full amount of the loan at risk, particularly when the loan payments are small (Ledgerwood, 2000). As Ayayi and Sene (2010) demonstrate, this indicator, which plays a determining role in the financial viability of MFIs, effectively captures portfolio quality.

The second most important quantitative risk assessment criterion, suggested by Arvelo *et al* (2008), is profitability, sustainability and operating efficiency. Four indicators are examined: financial self-sufficiency, return on average asset (ROAA), operating efficiency and productivity. They contend that when ROAA is used, extraordinary results such as donations, which are sometimes recognized in the financial statements as profits, should be excluded, and adjustments resulting from inflation or exchange differential should be made. Of the four indicators, operational efficiency is superior to measures such as: return on assets or financial self-sustainability (Cull, *et al.* 2007) because it takes into consideration the ability of the institution's management to attract funding (Kuchler, 2010). As for the last quantitative risk assessment criterion, Arvelo *et al* (2008) assert that understanding MFIs' strategic approach to asset and liability management provides an important index of the potential financial risk. The indicators examined include the lever effect, exposure to foreign currencies and liquidity, each of which is strategic or represents a financial decision by management.

2 Qualitative risk assessment criteria

The first criterion in the qualitative risk assessment is: management and strategy. As in any organization, management and strategy are crucial for MFIs' performance because decisions made by the executive branches and top management contribute greatly to MFIs' success/failure, especially in the early phases of their growth. Arvelo *et al.* (2008) note that management quality of top executives and governance bodies, strategy and the business plan, quality of support from members and networks, and human resources management are key indicators that must be monitored as part of sound risk management. . As for the second qualitative risk assessment criterion; Arvelo *et al* (2008) recommend analysis of the following indicators related to systems and reporting: management quality of information systems and accounting; quality and speed of data recording and quality of distribution and analysis of reports. Regarding the quality of information systems management, they maintain that particular attention should be paid to the level of automation, integration, adaptability to a changing business environment and ease of use by all employees, who would require training.

The third criterion is the operating procedures and internal controls.

Well-established operating procedures and internal controls let MFIs attain operating efficiency, avoid fraudulent activities, promote the continuity of operations and ensure maximum transparency towards customers and investors. Regarding internal controls, Arvelo *et al.* (2008) point out that given the number of transactions managed by an MFI per day and the fact that money moves from customers to credit agents to agents at the head office; MFIs must permanently monitor liquid cash management and put in place fraud detection measures.

Finally, Arvelo *et al* (2008) maintain that because of the nascent character of the microfinance industry, the growth potential of an MFI has a notable impact on its solvency. They add that in many countries, regulatory restrictions and the political climate influence MFIs' activities significantly. Thus, to examine the growth potential of microfinance, they recommend analysis of the regulatory environment, government commitment, the number and density of micro-entrepreneurs, and micro-entrepreneur use of microcredit.

Applying the integrated risk assessment approach developed by Arvelo *et al* (2008) to Vietnamese MFIs,¹⁵ Ayayi (2012) concludes that: i) MFIs that have the highest scores in management and strategy, systems and reporting and internal and operating controls have the best financial situation; and ii) the age of the MFIs is a

¹⁵ The study focused on 3 MFIs from 2005 to 2007. From among the 13 MFIs on Mixmarket in 2008, the following MFIs had data that met the analysis criteria: Capital Aid Fund for Employment of the Poor (CEP), Binh Minh Community Development Consulting Company (Binh Minh CDC) and TYM (Vietnam Women's Union).

potential determinant of the risk level (with experience, control of credit risk improves).¹⁶ The author also finds that active commitment by the government via a regulation system that promotes MFIs is a positive signal for current and future investors and donors of Vietnamese MFIs. The same study reports that a low credit risk level is a direct consequence of solid implementation of governance practices and sound and viable financial management.

Similarly, Ayayi and Bamba (2010) studied credit risk in nine Tanzanian MFIs.¹⁷ They contend that the organizational form of MFIs influences their credit risk management. They also demonstrate that non-bank financial institutions (NBFI) have the lowest risk level, whereas NGOs and banks have the highest risk level.

7. REGULATION AND SUPERVISION OF MFIs

Regulation and supervision has become an extremely important consideration in the microfinance industry. Regulation refers to a set of constraining rules (regulatory framework) stipulating the rights and duties of microfinance actors (Chavez and Gonzalez-Véga, 1992), whereas “the notion of supervision encompasses systematic control of MFIs to ensure that they abide by the rules. If not, they must close” (CGAP, 2000, p.1). Gallardo et al (2005) describe three methods of regulation of microfinance activities: i) simple registration as a legal entity; MFIs concerned are regulated uniquely through their governance structure; ii) non-prudential regulations that provide standard rules for the conduct of operations, and supervision leading to control of financial statements to protect the interests of customers and investors; iii) total prudential supervision that consists in the monetary authorities’ auditing compliance with rules and standards such as minimum capital requirements and acceptable liquidity and asset management ratios to ensure the financial health of institutions.

Although regulation and supervision of microfinance is the subject of heated debate, it is generally acknowledged that regulatory frameworks and supervision procedures must take into account the specific characteristics of the microfinance sector (Labie, 2004). As part of this debate, Shankar and Asher (2010), and Cull, Kunt and Morduch (2009b) underline the need for a regulatory and supervision policy in this sector, while Loubière, Devaney and Rhyne (2004) express mitigated views on this topic.

Shankar and Asher (2010) argue that considering the questions of regulation and supervision can contribute to effectively implementation of inclusive finance and thus create an environment in which all stakeholders can evolve confidently. They show that it is important to develop a regulation structure for the sector for several reasons. For one, this would enable MFIs to offer secure saving services. Further, MFIs could better control growing private investment in the sector. They could also better manage risk and protect clients with innovative products such as insurance services, money transfer and pension products, and standardize practices despite the diversity of statuses of MFIs. These results converge with those of Cull, Demurguç-Kunt and Morduch (2009b), who assert that regulation would allow MFIs to develop fully in the financial system, particularly those that aim to gather savings.

These developments are countered by Loubière, Devaney and Rhyne (2004), who contend that supervision and regulation of microfinance benefits the microfinance sector (by protecting the savings of the poor) only when the process is well designed and perfectly implemented. They assert that inappropriate regulation and supervision systems (those that are not adapted to the characteristics of microfinance or not in phase with the local realities of the microfinance industry) cannot favor the growth of microfinance.

Labie (2004) notes an emerging consensus that organizations that do not collect savings need not meet all the prudential criteria applicable to regulatory organizations. He explains that control must be exerted primarily by fund providers (institutional donors, foundations, etc.). Nonetheless, MFIs that collect public savings should be regulated and controlled by an appropriate official body (monetary authorities). Labie suggests that institutions that collect only savings from their members, notably “closed” savings and credit cooperatives, be treated the same way as the non-regulated MFIs in the first group, arguing that it is up to the investors to ensure proper

¹⁶ This result was corroborated by the very high score of the MFIs CEP and TYM, which were founded in 1991 and 1992 respectively, compared with Binh Minh, founded in 2005.

¹⁷ The study examined 9 MFIs: two banks (AKIBA Commercial Bank Ltd and Mbinga Community Bank), five NGOs (FAULU Tanzania Limited, FINCA Tanzania, Iringa Development of Youth, Disabled and Children Care (IDYDC), Pride Tanzania, Small Enterprise Development Agency (SEDA)) and two non-bank financial institutions (BRAC Tanzania and SERO Lease and Financial Ltd).

fund management. These measures are corroborated by the requirements of the CGAP guide (2009) on regulation and supervision of microfinance, which insists that the formation of supervision teams reflect the specific features of the MFIs' portfolio (Shankar and Asher, 2010).

Further, regulation and supervision differ between countries and regions. Gallardo et al. (2005) find that Benin, Ghana and Tanzania have different MFIs and varying microfinance regulation experience. In Benin (as in all of the UEMOA: PARMEC law)¹⁸ regulation is based on the objective of controlling the microfinance sector. This is directly aligned with monetary authorities' regional control of banks and of financial establishment operations. The Ghanaian system emphasizes the introduction of diverse non-bank financial institutions in the system. In Tanzania, support from donors and international organizations has led the regulation to focus on promoting and developing commercial microfinance as a fundamental tool to reduce poverty, in line with economic growth objectives.

Similarly, Loubière, Devaney and Rhyne (2004) indicate that Bolivia, Colombia and Mexico have three distinct methods of regulation and supervision of microfinance. Bolivia has created a specialized system to regulate and supervise microfinance. Mexico has initiated a system of delegation in which federations of MFIs practice self-regulation. Colombia has no specific regulation system for microfinance although the government has recently begun to take specific initiatives in this area.

Shankar and Asher (2010) report that in India, the regulation policy of this sector is highly prudent, which precludes the emergence of adequate structures to solicit savings (small amounts deposited at very short intervals). It also leads to a lack of means of affordable and accessible payments. Jayo, Gonzales and Conzett (2010) show that in Western Europe, the microfinance market is dominated by NGOs and microfinance associations, followed by non-bank financial institutions. This situation can be explained by the absence of regulation of the sector in that region. In contrast, in Eastern Europe, regulation allows for profit private organizations, mutuals and non-bank financial institutions (the most numerous) to gather savings and issue microcredit.

Several studies have examined the impact of regulation and supervision on the performance and scope of MFIs. For instance, Cull, Demurgüç-Kunt and Morduch (2009b)¹⁹ show that supervision is associated with a high average loan size and fewer loans extended to women, and that regulation and supervision are not significantly related to profitability. Hartarska (2005) finds that regulation and supervision have a negative impact on the financial performance of MFIs in central and Eastern Europe, and in countries that formerly belonged to the Soviet Union. He asserts that these MFIs offered a lower return on invested assets than the others, and a minor impact on the wellbeing of their clients. In the same vein, Hartarska and Nadolnyak (2007) point out that regulation had no effect on financial performance and that regulated MFIs served fewer poor borrowers. These results were confirmed by Mersland and Strom (2009), who assert that regulation does not have a significant impact on financial or social performance.

8. MICROFINANCE PRODUCTS

The flagship product of microfinance is microcredit. However, many microcredit programs in MFIs were broadened to include services such as collection of savings, retirement products (pension plans), health, life and flood insurance, and money transfers (Aslanbeigui, Oakes and Uding; 2010). MFIs have thus marketed new products in response to the competition.

Their offer of microcredit is increasingly innovative, particularly by coupling microcredit with non-financial services such as management training, health services, legal advice, political education and business coaching (Marconi and Mosley, 2006; Karlan and Valdivia (2007).²⁰ Ashraf, Giné and Karlan (2005) describe a

¹⁸ The Parmec law is the regulatory framework in the UEMOA (Union Economique et monétaire de l'Ouest Africain), which formerly recognized only the status of savings and credit cooperatives, was amended in 2007 to allow diverse legal statuses of MFIs. UEMOA encompasses eight countries: Benin, Burkina Faso, Cote d'Ivoire, Guinea Bissau, Niger, Senegal and Togo.

¹⁹ Their study covers 245 MFIs around the world.

²⁰ Marconi and Mosley (2006), analyze data on the financial performance of Bolivian MFIs in the village credit union ProMujer, whereas Karlan and Valdivia (2007) examine data regarding groups of female Peruvian entrepreneurs that contract microcredit.

microcredit program for small farmers in Kenya called DrumNet, which has two main components: i) a cashless program of microcredit that links commercial banks, small farmers and suppliers of essential products for farm operations (to counter moral hazard); ii) a services market offered through integration of marketing and a payment program. Ashraf, Giné and Karlan find an increase in income per cultivated hectare among farmers that benefited from this product.

Beyond microcredit, microfinance is intended to help the poor that cannot save at home over the long term because of the risks of theft and the constant temptation to spend any small amounts they might save (Banerjee and Duflo (2007). Gonzalez and Meyer (2009) underline the importance of micro-savings, which represents an alternative source of financing that allows MFIs to attain independence from donors and investors to better contribute to fighting poverty (Mendoza and Vick, 2008).

All these findings are supported by empirical studies. Gonzalez and Meyer (2009)²¹ show that average deposits per saver are associated with a larger scope in both retail sales of savings products of MFIs, and the granting of microcredit. Similarly, Mendoza and Vick (2008) describe an innovative savings product called “buying to save” that CEMEX, a Mexican MFI, applied in “Patrimonio Hoy.” This well-designed savings program gives low-income families access to services, cement and other construction materials on credit to improve their living conditions.

Mendoza and Vick (2008) report that innovative micro-insurance and money transfer products can meet customers’ demand for better risk protection and easier access to financial services. Another innovation is to condition access to credit on the purchase of an insurance policy. For example Grameen Koota, a solidary Indian MFI, requires borrowers to deposit 2% of the amount of their loan in an emergency fund, whereas FINCA-Uganda, a village bank, offers credit associated with life insurance contracts in partnership with American Insurance Group at a cost of 1% of the total loan amount. In both cases, the contract is executed when the borrower dies, which represents better risk management for the customer, the group and ultimately for the MFI itself (Roodman and Qureshi, 2006).

Nonetheless, Weber (2010) stresses the need for financial products and services with social, environment and ethical connotations. He says that one criticism of microcredit nowadays is that some credit agents use violence, especially moral, to ensure a good repayment rate (which has led, for example, to suicides of microcredit borrowers in India). He adds that to ensure the viability of microfinance products, particular attention must be paid to the inflation rate and exchange risks. This is corroborated by Rhyne (2009), who contends that for microfinance products to be viable and have a social impact on customers, they must: i) be of sufficient quality; ii) be transparently and equitably priced; iii) customers must avoid taking on excess debt; iv) indebtedness of MFIs must be appropriate; and v) the MFI must have individualized information on its customers; vi) executives must exhibit ethical behavior; vii) the MFI must finance products that are both environmentally and socially viable.

Lastly, Pereira (2010) demonstrates that an offering of microfinance products and services that is not adapted to the customers and to the regulation and supervision system hinders the viability and scope of MFIs regarding poor households and micro-entrepreneurs. He gives the example of Sri Lanka, where the absence of quality products and services offered by MFIs has decreased their scope and repayment rates and the cost/efficiency ratio, and caused recurrent losses.

9. IMPACT OF MICROFINANCE

Impact refers to the extent to which income and the well-being of the population targeted by microfinance change. A contradictory debate exists in the literature in that some view microfinance as having a positive impact on the living condition of the poor populations targeted (Imai, Arun and Annim, 2010; Montgomery; 2009; Khandker, 2005; McKernan 2002; Pit and Khandker, 1998; Imai, Arun and Annim, 2010), while others consider the impact minor or nonexistent (Aslanbeigui, Oakes and Uding, 2010 Roodman and Morduch, 2009; Montgomery and Weiss, 2005; Morduch, 1999).

Those that believe that microfinance, particularly microcredit, has a positive impact on the living conditions of the targeted populations include Montgomery (2009), who asserts that access to and participation in the microcredit program of Kushhali bank in Pakistan has had a positive impact on both economic and social welfare indicators such as health and education, in addition to generating jobs and income. Overall, the program

²¹ Analysis based on 1093 MFIs in 104 countries in Mixmarket countries, 2007.

has allowed households to increase their health care spending, especially for children. The same author finds that lending to women or groups supported by partner NGOs improves child education, especially for girls, who are more likely to be enrolled in school compared with non-participating households. The program has also increased the empowerment of women.²²

Similarly, Basher (2009)²³ maintains that microcredit allows entrepreneurs to progressively increase their engagement in productive activities as they acquire experience. Basher clearly shows that the role of microcredit in the increase in income of target populations does not originate uniquely from the evolution from low productivity activities, but rather from the shift to more productive activities. These results corroborate those of McKernan (2002), who highlights a very large and significant impact of microcredit programs on the profits of self-employed workers in Bangladesh (approximately 175% or an \$80 increase per month) for the total effect and a large and significant positive effect (125% or \$55 increase per month) concerning non-financial services. The author demonstrates that it is the poorest households (i.e. those that have the fewest assets) that profit from the programs the most. These results are particularly significant because at the time of the study, per capita income in Bangladesh was \$220, and the average monthly income of a family of four was \$73. Further, Basher²⁴ finds that this very large positive impact on productivity implies that microcredit programs can be a viable strategy to reduce poverty among landless poor. Similarly, Pit and Khandker (1998)²⁵ contend that microcredit increases household consumption and contributes to reducing poverty, especially when loans are extended to women. Khandiker (2005)²⁶ subsequently reported that microfinance reduces the average level of poverty of villages by 1% each year in regions where the program exists, a finding observed in 40% of the villages concerned. He argues that microfinance has a greater effect on extreme poverty than on moderate poverty.

Imai, Arun and Annim (2010)²⁷ provide evidence of positive and significant effects of productive microcredit on a multidimensional indicator of well-being, Index Based Ranking or IBR.²⁸ They show that microcredit has a positive, significant effect on reducing poverty in rural areas. They also maintain that in all the cases observed, procuring microcredit for productive activities has a greater impact on reducing poverty for people below the poverty line. Karlan and Zinman (2006) reported that for a South African MFI, extending its credit products to consumption probably had positive effects on employment, reducing hunger and poverty and increasing the lenders' profits. Mushtaque, Chowdhury and Bhuia (2004) examined the impact of BRAC in Bangladesh, and

²² The study examined a random sample of 1554 existing and future customers of a bank from the 139 villages where the bank operates, and a control sample of 1427 people from the same area. The study involved the administration of a questionnaire that asked: what is the impact of the microcredit program on the well-being of households? The researchers adopted a very broad definition of well-being that included non-quantitative measures such as education, health and empowerment. The length of the questionnaire was limited to allow respondents to complete it within one hour. For empirical analyses, the ordinary least squares (OLS) method was used. For regressions in which the variable of interest was qualitative, with a yes or no answer, logic estimation techniques were used.

²³ The study analyzed data on Grameen Bank (collected in 2000, choice of four agencies, five villages per agency and 25 participants per village based on probabilistic sampling). They used the adjusted Euler Equation for distribution of marginal income between current and future consumption.

²⁴ McKernan (2002) used primary data concerning households that did or did not participate in Grameen Bank's programs, and three similar microcredit programs (Bangladesh Rural Advancement Committee (BRAC), Bangladesh Rural Development Board's (BRDB) and Rural Development (RD-12) program) to measure the total effect of nonfinancial services on the productivity of participating micro-entrepreneurs. The total effect was measured by estimating a profit equation, and nonfinancial services by estimating a conditional profit equation on productive capital. Productive capital and participation in the program are considered endogenous variables in the analysis. The study concerned 87 villages in Bangladesh in 1991-1992 and evaluated the impact of the microfinance programs of the MFIs mentioned above on self-employment profits.

²⁵ Khandker (1998) applied a quasi-experimental design to the data of 1991-1992 (1789 households, 87 villages of 29 upazillas (districts) of Bangladesh chosen at random from among 391 upazillas). They found a return of 18% for female borrowers, which should correspond to a 5% reduction in poverty per year and per person, and 1% for the village in question.

²⁶ Khandker (2005) used panel data for 1999, concerning 1738 households, in a dynamic model that looked at variations over time of the effects of microcredit on consumption of participating and nonparticipating households.

²⁷ Imai, Arun and Annim (2010) explore whether an Indian household's access to microfinance contributed to reducing poverty. They used the effect treatment model to estimate the effects of entrepreneurial microcredit leading to investment on the reduction in the level of household poverty.

²⁸ IBR (Index Based Ranking) is a multidimensional indicator of poverty that considers the needs of the population (health, type of housing, work, job security and food security) (Sinha, 2009).

found a higher rate of child survival, a significant improvement in nutritional conditions, greater use of family planning and improvement in childhood education in households participating in microcredit programs compared with other households.

Gonzalez and Meyer (2009) and Mendoza and Vick (2008) argue that microsavings can enhance living conditions for populations with low income and reduce poverty in general. The results converge with those of Ashraf, Karlan and Yin (2007), who report that microsavings services of a rural bank in the Philippines have increased the empowerment of women in households studied, especially those with limited decision-making power. The women are thus more inclined to purchase durable equipment for households (sewing machine, iron, cooking appliances, etc.).

Nonetheless, these findings on the positive impact of microfinance on targeted populations have been contested or at least tempered by other research. Aslanbeigui, Oakes and Uding (2010)²⁹ argue that the concept of empowerment of women is not a solid basis for evaluating the impact of microcredit. They maintain that the objective of reducing poverty in Bangladesh cannot be attained unless changes in traditional customs and institutions that govern relations between men and women, such as patriarchy and purdah (veiled women living as recluses) take place. They consider it essential that the evaluation consider generational and intergenerational differences in the lives of borrowers and their families, in a long-term perspective. Further, they suggest that the role of microcredit in the borrower's life story be examined.

Montgomery and Weiss (2005) reviewed most studies conducted in Latin America and Asia, and report that microfinance has a limited ability to reach the poorest people. However, they note that in Latin America, MFIs are viewed as a means of development of microenterprises rather than as a tool to fight poverty.

Morduch (1999), using simpler estimators than those of Pit and Khandker (1998), did not find an impact on the level of consumption (with the same data of 1991-1992). Roodman and Morduch (1999)³⁰ challenged these results by replicating the studies of Pit and Khandker (1998) and of Morduch (1999) with the same data and methodology. They found that the proof provided by the above studies on the impact of microcredit is weak; they obtain an opposite sign from Pit and Khandker. Nonetheless they do not conclude that lending to women is harmful to MFIs.

Although Roodman and Morduch (2009) do not minimize the impact of microcredit on poor borrowers in Bangladesh, they contend that irrefutable statistical proof is rare in the literature. They argue that the main difficulties in examining the impact of microfinance have been the lack of clear quasi-experiments and the absence, until recently, of randomized tests. They cite the example of Banerjee et al. (2009), who use a traditional randomized method to evaluate an urban microcredit program in India. The authors find that after one year, a set of economic results was obtained (albeit without a high average): the impact on health, education and empowerment of women is negligible.

Lastly, most of these impact studies, conducted mainly in Bangladesh, have largely contributed to reinforcing four widespread ideas about microcredit: i) it generally reduces poverty; ii) it is even more effective when loans are granted to women; iii) the poorest benefit the most from microcredit; iv) it helps families meet expenses, ease hunger and provide a better education and health care for children.

10. CONCLUSION AND DIRECTIONS FOR FUTURE RESEARCH

The literature review presented above illustrates that microfinance programs propose products and services such as microcredit, microsavings, micro-insurance, pension products, and money transfer services. However, microcredit which is increasingly accompanied by nonfinancial and incentive services (training and coaching) represents a very important component for the success of microfinance programs (McKernan, 2002).

²⁹ Aslanbeigui, Oakes and Uding (2010) conducted an ethnographic study in 2008 involving ten women who were clients for 16 to 23 years, ages 34 to 60 and living in three districts situated in the capital city area (Manig-gonj, Dhaka, Gazipur). Each interview lasted approximately two hours. To maintain the uniformity of subjects covered, they used a questionnaire that included a set of 57 standard questions. The questions compared the respondent's living conditions before receiving the first loan by the Grameen Bank with their lives in 2008.

³⁰ Roodman and Morduch (2009) compared their 1999 data with those of Pit and Khandker (1991-1992), concerning participants and non-participants in the microcredit program with variables related to amounts borrowed and amounts spent on consumption. They also performed a double regression by the ordinary least squares method.

Similarly, microfinance has proven that it can ensure very high rates of repayment in a context of no guarantees and information asymmetry. However, high repayment rates do not necessarily translate into large profits for many MFIs. Thus, microfinance has not yet fully lived up to the promise of concomitantly generating profits and reducing poverty by targeting the most disadvantaged populations (Cull, Demirgüç-Kunt and Morduch, 2007). Development of the microfinance industry requires reinforcement of the political environment, improvement of the legal and regulatory framework, adoption of appropriate governance structures, management principles and operating procedures to allow actions that reflect a new and promising approach to microfinance (Benjamin and Charitonenko, 1998).

Similarly, Rhyne (2009) asserts that microfinance must meet several challenges if products and financial services are to be made more available to the potential clientele on a large scale. These challenges include: i) understanding the customers (knowing and satisfying their needs); ii) cost reduction (offering small loans to a large number of borrowers, creating costs that are often higher than the return on microfinance products); iii) credit risk management (a systematic credit risk management process is often unfeasible because the clients have no loan history or collateral on which this analysis can be based; iv) putting in place an efficient organization structure that reflects the specific characteristics of MFIs.

Today, while most of the research is focused on MFIs' financial sufficiency instead of the impact of microfinance programs on social welfare, it has become clear that this mission drift provides an opportunity to explore the avenues that allow MFIs to find a balance between the requirement of financial profitability and social goals. This has been particularly true since the 1970s: microfinance has emerged as a powerful poverty alleviation instrument in countries with a paucity of bank infrastructures and more importantly in the countryside and towns, for the underprivileged that wish to develop an income-generating economic activity to increase their well-being and that of their immediate family. To that end, the literature review indicates that rigorous studies should investigate the scope and impact of microfinance programs. Such studies could enrich the debate on microfinance by making it easier for the donor community to understand the role of microfinance in reaching the poor, its impact in various environments and its ability to achieve profitability while fighting poverty (Montgomery and Weiss; 2005).

To achieve this comprehensive result, future research should be devoted to the following critical issues that have not received attention in the financial economic literature: Why do MFIs go public? What drives microfinance fundraising? criteria distinguishing successful from unsuccessful micro-enterprises in the microfinance managers screening process; determinants of microfinance demand; and risk management of MFI. A better understanding of those issues is paramount for the survival for the microfinance industry. Finally, because the goal of microfinance is poverty reduction, and its primary target clients are those that cannot provide a backup for their loans, we strongly believe that other financial contract mechanisms that do not require interest payment to funnel capital to poor micro-entrepreneurs to nurture and to sustain the growth of their micro-business should be investigated. One such financial mechanism might be micro-equity (Ayayi (2009b)).

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