

# **BANKING THE UN-BANKABLE: AN EMPIRICAL STUDY OF RISK AND RISK MANAGEMENT BY MICRO-FINANCIAL INSTITUTIONS IN GHANA**



A research report submitted to the Faculty of Law, Commerce and Management, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Masters of Management in Finance and Investment.

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## **ABSTRACT**

This research work explores the risks that microfinance institutions (MFIs) face in their operations and the risk management strategies they adopt to mitigate their risks. Microfinance institutions serve some of the world's most financially challenged population who otherwise would not have access to banking services. Risk management within the context of microfinance banking has gained importance within the last decade due partly to the fact that most MFIs are adopting business/profitability principles in their operations. Also, due to the recent financial crisis, MFI cannot afford to be indifferent to risk management practices in the battle for survival, financial sustainability and self-sufficiency. The data for this study is from both secondary and primary sources; 48 MFIs in Ghana responded to a questionnaire made up of 25 questions. Analysis of the responses obtained was done using Chi-Square test of equal proportions, P-values and other descriptive statistics. The Analysis found that the microfinance institutions surveyed are aware of the types of risk inherent in their line of business and do in varying ways employ some form of risk management strategies to mitigate losses and enhance profitability. Since credit granting stands at the core of the operations of MFIs, the management of risk as a result of the credits extended is crucial for their survival and profitability.

**Key words: Micro-finance, Micro-finance institutions, risk, risk management, micro-credit, Ghana**

## LIST OF ABBREVIATIONS USED

|         |   |                                                   |
|---------|---|---------------------------------------------------|
| ARB     | - | Association of Rural Banks                        |
| ASSFIN  | - | Association of Financial NGOs                     |
| CBOs    | - | Community-based Organizations                     |
| CUA     | - | Cooperative Credit Union                          |
| DFID    | - | Department for International Development          |
| FINCA   | - | Foundation for International Community Assistance |
| FNGOs   | - | Financial Non-governmental Organizations          |
| GCSCA   | - | Ghana Cooperative Susu Collectors Association     |
| GHAMFIN | - | Ghana Microfinance institutions Network           |
| MASLOC  | - | Microfinance and Small Loans Centre               |
| MDA     | - | Ministries Departments and Agencies               |
| MFIs    | - | Micro-financial Institutions                      |
| MFISS   | - | Microfinance Integrated with Social Services      |
| MMDAs   | - | Metropolitan Municipal and District Assemblies    |
| NCA     | - | National Credit Act                               |
| NGOs    | - | Non-governmental Organization                     |
| PNDC    | - | Provisional National Defence Council              |
| RCBs    | - | Rural and Community Banks                         |
| RFSP    | - | Rural Financial Services Project                  |
| ROI     | - | Return on Investment                              |
| ROSCAs  | - | Rotating Savings and Credit Associations          |
| WOCCU   | - | World Council of Credit Unions                    |

## TABLE OF CONTENTS

|                                                                   |    |
|-------------------------------------------------------------------|----|
| CHAPTER 1 .....                                                   | 7  |
| INTRODUCTION.....                                                 | 7  |
| 1.1    Introduction .....                                         | 7  |
| 1.2    Context of the study .....                                 | 7  |
| 1.3    Problem statement.....                                     | 8  |
| 1.4    Objectives of the study.....                               | 9  |
| 1.5    Research questions.....                                    | 9  |
| 1.6    Significance of the study .....                            | 10 |
| 1.7    Outline of the study.....                                  | 10 |
| Chapter summary .....                                             | 11 |
| CHAPTER 2 .....                                                   | 12 |
| LITERATURE REVIEW .....                                           | 12 |
| 2.1    Introduction .....                                         | 12 |
| 2.2    Definition of microfinance .....                           | 12 |
| 2.3    The history of microfinance .....                          | 13 |
| 2.4    Terminologies used in microfinance .....                   | 14 |
| 2.5    Types and descriptions of microfinance products.....       | 16 |
| 2.6    Microfinance and development.....                          | 18 |
| 2.7    Risk and risk management by microfinance institutions..... | 20 |
| 2.8    Types of risks faced by microfinance institutions.....     | 21 |
| 2.9    MFIs' risk management and risk coping strategies.....      | 23 |
| 2.10   Review of literature on microfinance in Ghana.....         | 24 |
| Chapter summary .....                                             | 26 |
| CHAPTER 3 .....                                                   | 28 |

|                                                               |    |
|---------------------------------------------------------------|----|
| RESEARCH METHODOLOGY .....                                    | 28 |
| 3.1    Introduction .....                                     | 28 |
| 3.2    Sample and sample size.....                            | 28 |
| 3.3    Research methods .....                                 | 28 |
| 3.5    Data collection instruments .....                      | 30 |
| 3.6    Analysis and interpretation.....                       | 30 |
| Chapter summary .....                                         | 31 |
| CHAPTER 4 .....                                               | 33 |
| RESEARCH FINDINGS.....                                        | 33 |
| 4.1    Introduction .....                                     | 33 |
| 4.2    Facts about Ghana’s microfinance.....                  | 33 |
| 4.3    Description of MFIs in Ghana .....                     | 34 |
| 4.4    Descriptive statistics of closed ended questions ..... | 35 |
| 4.5    Chi-square analysis of risk management.....            | 36 |
| Chapter summary .....                                         | 44 |
| CHAPTER 5 .....                                               | 45 |
| DISCUSSION AND CONCLUSTION.....                               | 45 |
| 5.1    Introduction.....                                      | 45 |
| 5.2    Discussion.....                                        | 45 |
| 5.2.1    Risk factors and microfinance services .....         | 45 |
| 5.2.2    Ranking of risk factors .....                        | 46 |
| 5.2.3    Management of risk factors .....                     | 47 |
| 5.2.4    Preparedness for risk management.....                | 48 |
| 5.2.5    Effects of risk factors on service delivery .....    | 48 |
| 5.3    Conclusion.....                                        | 49 |

|     |                                 |                                     |
|-----|---------------------------------|-------------------------------------|
| 5.4 | Areas for further research..... | 49                                  |
|     | References.....                 | <b>Error! Bookmark not defined.</b> |



## LIST OF TABLES

|                                                                           |    |
|---------------------------------------------------------------------------|----|
| Table 1: Key Facts: Microfinance in Ghana .....                           | 33 |
| Table 2: Description of respondents by years in operation.....            | 34 |
| Table 3: Description of respondents by business status .....              | 35 |
| Table 4: Mean, Median, and Standard Deviation.....                        | 35 |
| Table 5: Chi-square test for responses to risk management questions ..... | 37 |
| Table 6: MFI general information .....                                    | 40 |
| Table 7: MFI risk and risk management response.....                       | 41 |
| Table 8: MFI operational questions .....                                  | 43 |
| Table 9: Fully Survey Response for coded questions .....                  | 55 |

# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction

This chapter serves as a general introduction to the work and outlines the empirical rationale for its thesis. Section 1.2 reveals the context of the study; Section 1.3 presents the problem statement; Section 1.4 presents objectives of the study; Section 1.5 presents questions of the study; Section 1.6 presents significance of the study; and Section 1.7 presents the outline of the rest of the study.

### 1.2 Context of the study

This study aims to investigate risk and risk management within the microfinance sector in Ghana. The last few years have witnessed a significant growth in the microfinance sector in most developing countries, including those in Africa, serving as an avenue of support for individuals, groups and small-scale businesses in need of small loans and financing options. According to Morduch (1999), microfinance institutions provide small-scale financial services to poor economic agents who are otherwise excluded from the formal banking sector. Such funding and loans are made available through a range of products and systems of intermediations targeted at low income clients with limited or no access to traditional/formal banking [lending] services. According to Ledgerwood (1998), the financial services provided through microfinance generally include savings and credit but can also include insurance and payment services.

In Ghana, the microfinance sector has evolved from a small informal industry to become a key component of the country's emerging financial sector, providing badly needed financial services to a significant segment of the population, mostly from the rural and informal production sectors. Like other developing and African countries, not only do the majority of Ghanaians reside in rural areas but, more significantly, a sizeable number of the country's working population engage in private informal sector activities. Thus, the role and importance of microfinance as a major source of finance for a significant segment of the country's population and for overall national economic development and poverty reduction cannot be overemphasized. The following facts are particularly germane: One, the poor need access to credit and funding opportunities to be able to work and thus improve their standards of living. Two, available empirical evidence indicates that the poor have the ability to efficiently and effectively use loans for investment and in generating income and three, formal financial and banking sectors have provided very little in the form of services to people within the low-income bracket (Asiama & Osei, 2007).

In other words, microfinance has emerged as an important financing instrument in many African countries (including Ghana), particularly in the quest to reduce poverty and achieve sustainable and equitable growth (Asiama & Osei, 2007). The provision of microfinance is not only a source of capital funds to the poor who are generally excluded from the financial services sectors of Ghana's formal economy, but also a part of the country's overall national development strategy. The country's microfinance sector is expected to expand its services and ensure access to credit and financial services to a significant segment of the population. The questions that remain unanswered are: how do these growing expectations and expansion in services of microfinance sector in Ghana relate to risks faced by the sector itself? How are these risks managed to ensure that while the needs of the public are met, the base and interests of microfinance service providers are also protected?

### **1.3 Problem statement**

Like many other African countries, there are huge informal sector economic agents in Ghana, who are unable to access credit and other financial services from the formal financial sector. As a result, there have been recent attempts to expand and regulate the microfinance sector through the implementation of a series of new legislations, resulting in a proliferation of microfinance institutions to meet the increased demands of the public. Key and far-reaching actions and legislative reforms undertaken during the past few years include the establishment of Rural and Community Banks (RCBs), the Agricultural Development Bank, the liberalization of the financial sector and the promulgation of Provisional National Defence Council (PNDC) Law 328 in 1991, which allowed the setting up of different types of non-banking financial institutions such as savings and loan companies, finance houses, and credit unions (Steel & Andah 2003). Similar reforms are undertaken in other parts of Africa as well (Adjei, 2010; Hietalathi & Linden 2006). For example, in South Africa, the biggest and perhaps the most far-reaching transformation in the microfinance sector was the implementation of the National Credit Act (NCA) of 2006 in June 2007 (Hietalathi & Linden 2006). It is estimated that the implementation of this Act has resulted in a significant expansion of the microfinance sector, in the form of increased demands for the financial services provided to the public.

This growing formalization and regulation of the microfinance sector in the form of passage of new regulations as well as the expansion of microfinance services however raise questions about the incorporation of risk and risk management in the activities of the microfinance sector. Compared to the formal banking sector, the microfinance industry in most countries can be traced back to non-governmental Organizations (NGOs) which accounts for their overreliance on grants and external concessional funds. In addition, most MFIs have not adequately incorporated risk and risk management strategies in their operations (Bruet, 2004; GTZ 2000). However, recent changes in the MFIs industrial landscape, particularly the pervasiveness of a more market-oriented approach have resulted in an increasing number of MFIs paying more attention to risk and risk

management than in the past (Bruet, 2004). In as much as MFIs have grown rapidly, serving more customers in larger geographic areas and offering a wider range of financial services and products, the key problem is that their internal risk management systems are often behind the scale and scope of their activities (GTZ, 2000). This research thus seeks to investigate the risk profile of selected MFIs in Ghana and the mechanisms these institutions are adopting to minimize and manage such risks.

#### **1.4 Objectives of the study**

The main objective of this study is to undertake an investigation into types of risks faced by (MFIs) in Ghana and the mechanisms these institutions have adopted to minimize and manage such risks. The objectives of the study are as follows:

- Ascertain the nature of risks faced by microfinance institutions in Ghana
- Examine the implications of risks faced by microfinance institutions for service delivery in particular and on the microfinance sector in general.
- Explore risk management strategies employed by microfinance institutions.
- Assess the impact of risk management strategies on micro-financial service delivery strategies
- Examine the role of state agencies and regulatory authorities in risk management.

#### **1.5 Research questions**

- What types of risks do different types of microfinance institutions in Ghana face and how do these risks impact on the delivery of microfinance services?
- Which, among the risks identified is/are more significant?
- What is the proportion of the risk levels experienced by microfinance institutions in relation to expected returns?
- What measures do MFIs take to manage risk within the microfinance environment in Ghana and how successful are these measures?
- What are the potential impacts of risk management strategies on microfinance institutions' ability and willingness to extend credit to their clientele?

## **1.6 Significance of the study**

Current available literature (see for e.g. Otero, 1999; Littlefield *et. al.* 2003; Simanowitz & Brody, 2004; IMF, 2005; Hulme & Mosley, 1996; and Adjei, 2010) highlights the potentials of microfinance, when properly harnessed, to make a significant contribution towards development and poverty reduction. Microfinance can promote higher investment leading to economic empowerment and thereby promote confidence and self-worth, particularly among poor economic agents (Otero, 1999).

While the challenges facing MFIs have been of interest to researchers and policy makers alike, the main focus has been on how to expand the reach of microfinance and how to make more funding available to the poor. There is however little attention being paid to risk and risk management by MFIs in emerging economies such as Ghana. This research aims to fill this void by making an empirical contribution to the discussion on risks and management of risk by microfinance institutions in Africa and other parts of the developing world in order to make the microfinance sector viable and mutually beneficial for all stakeholders.

From a practical perspective, the study will be useful for policy makers, managers and all other stakeholders and players within the Microfinance Industry on how to access and manage the risks they face. Findings of the study will reveal some of the common risks faced by all MFIs as well as the best practices adopted to overcome them. Thus, insights offered by both the review of the scholarly literature as well as the analysis of the empirical data will be useful for policy makers, managers and other stakeholders in designing and implementing effective risk management policies for the microfinance sector.

## **1.7 Outline of the study**

The remainder of the study is structured as follows: Chapter 2 provides a literature review of the study with a focus on the meaning and evolution of microfinance; relations between microfinance and development; the evolution of the microfinance sector in Ghana; and the exploration of risks and risks management within the microfinance sector in Ghana. Chapter 3 focuses on the methodology/analytical framework that is used in analyzing risk and risk management by microfinance institutions in Ghana. Chapter 4 presents the results of the analysis to answer specific questions raised in this study while Chapter 5 presents the discussion of the conclusion of the study, recommendations and suggestions for future work.

**Chapter summary**

This chapter offered a general introduction to the study, providing the context of the study, problem statement, research objectives, research questions, significance of the study and an outline of the rest of the study. This introductory chapter thus provides the general framework and sets the tone for the discussion and analysis in subsequent chapters focusing on literature review, research methodology, analysis of the empirical data and the summary and conclusions of the study.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This section provides a general overview of the available literature around the meaning and importance of microfinance for development. The chapter will also explain some key terms and concepts in relation to risk and risk management by microfinance institutions. It will also provide an overview of the literature on the evolution of the microfinance in Ghana. Section 2.2 provides a definition of microfinance; Section 2.3 presents the history of microfinance; Section 2.4 presents terminologies and key concepts in microfinance; Section 2.5 provides types and descriptions of microfinance products; Section 2.6 reviews relationship between microfinance and development; and Section 2.7 explores risk and risk management by MFIs. Section 2.8 presents types of risks faced by MFIs; Section 2.9 presents risk management and coping strategies adopted by MFIs while section; while 2.10 reviews the evolution and importance of microfinance in Ghana.

#### **2.2 Definition of microfinance**

Microfinance Institutions (MFIs) refer to financial institutions which provide financial services to poor economic agents who are typically excluded from the formal banking system for lack of sufficient collateral (Murdoch 2000). Lack of access to credit can be understood within the context of the absence of collateral that the economically challenged should provide to conventional financial institutions coupled with the various difficulties and high costs involved in dealing with large numbers of small, often illiterate borrowers (Weiss & Montgomery 2005). The poor mostly rely on money from money lenders at high interest rates or friends and family who themselves are cash trapped. MFIs try to overcome these obstacles through initiatives such as group lending and regular savings schemes. Microfinance is defined as the provision of financial services to low-income economic agents and very poor self-employed and/or unemployed people (Otero, 1999). These financial services according to Ledgerwood (1999) generally include savings and credit but can also include other financial services such as insurance and payment services. Schreiner & Colombet (2001) on the other hand, define microfinance as the attempt to improve access to small deposits and small loans for poor households neglected by the formal banking sector. All around the world, poor economic agents are excluded from formal financial and banking systems. As a result of this exclusion, the poor, especially those in the developing world have developed a wide variety of informal, community-based financial arrangements to meet their financial needs. Over the last twenty years, an increasing number of formal sector organizations (non-government, government, and private) have been created for the purpose of meeting those same needs. Such

informal and formal arrangements offering financial services to poor economic agents come to be commonly referred to as microfinance (Brau & Woller, 2004).

In the context of Africa, the extent of poverty and the existence of a huge informal and private sector, with little or no access to formal sector financial services make micro-financial involvement particularly crucial (Steel et al. 1997). According to Robinson (2001), microfinance refers to small scale financial services for both credits and deposits that are provided to people who farm or fish or herd; operate small or microenterprise where goods are produced, recycled, repaired, or traded; provide services; work for wages or commissions; gain income from renting out small amounts of land, vehicles, draft animals, or machinery and tools; and to other individuals and local groups in developing countries in both rural and urban areas. Thus, microfinance has often been understood as the means by which poor economic agents convert small sums of money into large lump sums (Rutherford 1997). A related term common in the literature on micro-finance is 'micro-credit'. Micro-credit refers to the provision of small loans to entrepreneurs, who are unable to qualify for traditional bank loans. According to Elahi & Rahman (2006), the term 'micro-credit' indicates the provision of loans to the poor to establish income-generating projects, while the term 'microfinance' has come to be used to indicate what has been described as the second revolution in credit theory and policy that are customer-based rather than product-based. The terms 'micro-credit' and 'microfinance' tend to be used interchangeably to indicate the range of financial services offered specifically to poor economic agents, low-income households and micro-enterprises (Brau & Woller, 2004). In developing countries, micro-credit enables very poor economic agents to engage in self-employment schemes that generate income, hence allowing them to become economically and financially self-reliant.

### **2.3 The history of microfinance**

It is widely known that the terms 'microcredit' and 'microfinance' are relatively new in the field of development economics. The term first came to prominence in the 1970s (Robinson, 2001; Otero 1999). According to these scholars, prior to this period, and from the 1950s through to the 1970s, the provision of financial services by donor government and agencies or governments to the poor and small businesses was mainly in the form of subsidized rural credit programmes. These often resulted in high loan default rates, high losses and an inability to reach poor rural households. Robinson (2001) argues that the 1980s represented a turning point in the history of microfinance in that MFIs such as the Grameen Bank 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 during this time that the term "microcredit" came to be widely used in development. The distinction between microcredit and the subsidized 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 reliant on the informal sector for credit. It became clear for the first time that microcredit could extend its outreach while being profitable at the same time.

According to scholars on microfinance evolution such as Robinson (2001) and Dichter (1999), the 1990s saw a fast growth in the number of microfinance institutions created and an increased emphasis on reaching a larger number of economically disadvantaged people. Indeed, Dichter (1999) refers to the 1990s as the microfinance decade. In spite of its humble beginnings, microfinance has now turned into an industry with a significant role in economic development and poverty reduction (Robinson 2001). Therefore, since the 1970s, and especially since the new wave of microfinance in the 1990s, microfinance has emerged as an important tool for the enhancement of development policy and for poverty reduction in developing economies. With the growth in microfinance institutions, focus shifted 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 apparent that the poor had a demand for these other services (MIX, 2005)<sup>1</sup>.

## **2.4 Terminologies used in microfinance**

There are certain terminologies and concepts that are used exclusively in microfinance such as collateral-free loans, group lending and market-level interest rates. While terminologies and concepts have become almost ubiquitous in the microfinance literature, especially in relation to microfinance institutions, it is however debatable, if any of the above characteristics are necessary conditions for an organization to be classified as a microfinance institution.

Small loan transactions, though probably the most essential, some MFIs focus on both lending and savings mobilization. (although few focus entirely on savings without engaging in any lending). Although MFIs often target small enterprises and businesses, they differ as to whether they require evidence of the existence of small business as a condition for a loan. Additionally, some MFIs require collateral or “collateral substitutes” such as land, house or other items of value to the borrower. These collaterals are most likely to be over, the same or below the value of the loan sort by the client.

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<sup>1</sup> See, <http://www.mixmarket.org/>

Even though some MFIs insist that their loans be used for productive purposes to ensure repayment, it is very difficult to monitor the manner in which the loans are used. However, if loans are officially restricted for business investments, clients may not report using some or all of the funds for consumption. According to Groenevelt (in Hen, 2010)<sup>2</sup>, borrowing money for a house or car is something people manage to do, if they have a steady job.

Group lending is a common practice among MFIs but certainly not the only method of providing small loans to small and start-up businesses. Many MFIs offer individual loans to their reputable clients and at times to first-time borrowers. Grameen Bank, one of the pioneers of the microfinance movement and of the group lending schemes, has since shifted to individual lending schemes and programs.

MFIs' focus on "poor" clients is almost universal, with varying definitions of the word "poor." This issue has been made more important recently due to legislation from the United States Congress that requires USAID to restrict funding to programs that focus on the poor. Some argue that microfinance should focus on the "economically active poor," or those just at or below the poverty level (Robinson 2001). Others, on the other hand, suggest that microfinance institutions should try to reach the needy (Daley-Harris 2005).

In general most (but not all) microfinance programs focus on women. Women have been shown to be better at repaying their loans and using a greater percentage of the proceeds from their business activities<sup>3</sup>. Worldwide, the Microcredit Summit Campaign reports that 80% of microfinance clients are female. However, the percentage of female clients varies considerably from region to region, with the highest percentages in Asia, followed by Africa and Latin America (Armendáriz, B., & Labie, M. 2011)

Microcredit loans are designed to be offered at the current market interest rates so that the MFIs can recover their costs but not so high that they make abnormal profits off the poor. This concept is of particular importance since organizations that charge high interest rates will likely not be cheaper than the moneylenders

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<sup>2</sup> See, <http://www.european-microfinance.org/data/file/Librairy/Hoogendoorn-Thesis-Project-Sustainable-Microfinace.pdf>

<sup>3</sup> Higher repayment rates for females is commonly believed but not well documented. In evidence from consumer loans in South Africa (Karlan and Zinman 2006c), women are three percentage points less likely to default on their loans, from a mean of fifteen percent default. Little is known, however, as to why this is so.

they seek to replace, and institutions that charge subsidized rates can distort markets by undercutting other lenders that are attempting to recover their costs or break even. This practice has effects on impact assessments because the less clients must pay in interest, the more they could be expected to show in increased income. When the interest rates of institutions that fall outside of “normal” microfinance interest rates is compared, unreasonable conclusions will be made about the effectiveness of one program as opposed to another, since each type of program caters for a different group of clientele and therefore imposes different costs on their client. The sustainability of an organization (as defined roughly by *de facto* World Bank policy) does not require each and every product or target market to be sustainable, but rather that the organization as a whole is sustainable. Organizations could charge lower interest rates for the poor or very poor individuals, so long as they generate sufficient profits from those lending activities to cross-subsidize such a program. Such programs might in the long term be sustainable if the initially-subsidized program leads to client loyalty and a long-term relationship with the MFI (World Bank 1998)

## **2.5 Types and descriptions of microfinance products**

There are five key structures or categories of microfinance institutions identified: these are Rotating Savings and Credit Associations (ROSCAs); the Grameen Solidarity Group Model; the Village Banking Structure; Microfinance Integrated with Social Services (MFISS) and Credit with Education.

### **Rotating Savings and Credit Associations (ROSCAs)**

Rotating savings and credit associations (ROSCAs) and group lending schemes are the most common microfinance alternatives for poor economic agents. ROSCAs come in two main forms, those that disburse funds randomly and those that use the bidding process. A random ROSCA allots its funds based on random draws, where the winning member receives the funds for a period of time. The process is repeated excluding each previous winner or recipient until each participant has received the funds once. The allocation of ROSCA by bidding, however, involves participants bidding competitively for the pool and the funds are subsequently allocated to the higher bidder. As in other ROSCAs, participants receive the pool only once over the life of the specific ROSCA (Anderson & Baland, 2002; and Besley et al. 1993). The motives of ROSCA participation include the need to acquire consumer durables (Hinda & Kirton, 1999); intra-household conflict in resource allocation (Anderson & Baland, 2002); insurance (Klonner, 2003; Calomiris & Rajaraman, 1998); self-control over the use of funds in the presence of time inconsistent preferences (Gugerty, 2005); and handling social pressures (Ambec & Treich, 2003).

### **The Grameen Solidarity Group Model**

The Grameen Solidarity Group Model is based on group peer pressure where loans are made to individuals in groups of between four and seven (Berenbach & Guzman, 1994). Group members collectively guarantee loan repayment, and access to any future loans is based on successful repayment by all group members. According to Berenbach & Guzman (1994), solidarity groups have proved effective in deterring defaults as evidenced by loan repayment rates achieved by organisations such as the Grameen Bank, who use this type of microfinance model<sup>4</sup>.

### **Village Banking Structure**

Village Banking is a type of group-based lending most common nowadays. This lending structure was developed by the Foundation for International Community Assistance (FINCA) in Latin America in the mid-1980s. The method was developed as a tool for fighting poverty amongst women. In places where MFIs provide village banking, individuals who want to receive a loan for income-generating or business activities come together to form a village bank. Typically, the village bank consists of women in groups of between 20 to 40 members (Dunford, 2001). Participation of individual members is central in the management of the entire loan process that is the distribution, collection of repayment, repayment, and book keeping. There is an initial period of training when the groups learn to manage their own village bank and its rules (Dunford 2001).

### **Microfinance Integrated with Social Services (MFISS)**

Microfinance integrated with social services is a type of structure where MFI's combine microfinance services with social services such as education and health. This structure emerged to ensure accessibility of financial services to the poor as well as encourage their participation in other community and social initiatives. There are three main forms of integrating financial and social services (Dunford, 2001). The first form is the linked Service in which a specialized MFI, offering financial services incorporates one or more independent organisations that offer social services to its clients at the same time. The next form is the parallel service which involves the MFI offering financial and social services to its clients through two or more different programmes. Lastly there is the unified service, where one organisation/MFI offers both financial services and social services to its clients, through one unified programme with the same personnel handling both services.

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<sup>4</sup> 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 more members receive loans and after another period of successful repayment, the final member receives a loan (Ledgerwood, 1999).

### **Credit with Education Structure**

Credit with education incorporates education in village banking meetings. Credit with Education was first launched in Mali and Thailand in 1989 to address access and utilization problems of food insecurity (McNelley & Dunford 1998). This structure combines microcredit loans to very poor women with health and business education. The loans transform women into entrepreneurs who run mostly home-based and small businesses, such as making food products and selling craft. The programme helps the women to generate a regular income and enhances their self-worth. Within this structure, field agents, usually from the local area, are responsible for promoting and recruiting new village groups, and providing the new groups with initial training in financial and other relevant issues. The idea of this structure is to equip participants with life changing information to improve their life as well as the life of their immediate family. Each Credit with Education programme has its own mix of educational topics such as health, child nutrition, micro business, management, etc. (Dunford, 2001).

## **2.6 Microfinance and development**

According to proponents, microfinance has a critical role to play in spurring on development at the local level. For example, the UNCDF (2004), citing other studies, have shown that microfinance plays three key roles in development: It helps very poor households to meet basic needs and protects against risks; it is associated with improvements in household economic welfare, and it helps to empower women by supporting women's economic participation and promoting gender equity. Otero (1999) states that microfinance creates access to productive capital for the poor economic agents, which together with human capital, addressed through education and training, and social capital, achieved through local organisation building, enables people to move out of poverty. By providing capital to the economically challenged, his or her sense of dignity and self-worth is restored thus empowering them to participate both economically and socially in society.

The aim of microfinance is not solely about providing capital to the poor but also combating poverty on both the individual and institutional level. Microfinance aims at creating institutions that deliver financial services to the poor who are mostly ignored by the formal banking sector. According to Otero (1999), the poor are generally excluded from the financial services sector of the economy so MFIs have emerged to address this market failure. By addressing this gap in a financially sustainable manner, MFIs can become part of the formal financial system of a country and so can access capital markets to fund their lending portfolios, allowing them to dramatically increase the number of poor people they can reach.

More recently, studies conducted by Littlefield et.al. (2003), Simanowitz & Brody (2004) and the IMF (2005) have commented on the critical role of microfinance in achieving the Millennium Development Goals (MDGs). In particular, Simanowitz & Brody (2004) state that microfinance is a key strategy in reaching the

MDGs and in building global financial systems that meet the needs of the poor. Littlefield et. al. (2003) argues that microfinance is a critical contextual factor with strong impact on the achievements of the Millennium Development Goals and that microfinance is unique among development interventions: it can deliver social benefits on an ongoing, permanent basis and on a large scale. Various studies have shown how microfinance has played a role in eradicating poverty, promoting education, improving health and empowering women.

However, not all authors are proponents of the role of microfinance in development. For example, Hulme & Mosley (1996), while acknowledging the role microfinance can have in helping to reduce poverty, concluded from their research on microfinance that most contemporary schemes are less effective than they might be” (1996). They state that microfinance is not a panacea for poverty alleviation and that in some cases the poorest people have been made worse-off by microfinance. In that regard, Rogaly (1996) finds five major faults with MFIs. He argues that they encourage a single-sector approach to the allocation of resources to fight poverty; that microcredit is irrelevant to the poorest people; that an over-simplistic notion of poverty is used; that there is an over-emphasis on scale, and that there is inadequate learning and change taking place.

Others like (Wright 2000) state that much of the skepticism of MFIs stems from the argument that microfinance projects fail to reach the poorest, generally have a limited effect on income, drive women into greater dependence on their husbands and fail to provide additional services desperately needed by the poor. In addition, Wright says that many development practitioners not only find microfinance inadequate, but that it actually diverts funding from more pressing larger interventions such as health and education to individual economic schemes. As argued by Navajas *et al* (2000), there is a danger that microfinance may siphon funds from other projects that might help the poor. They state that governments and donors should know whether the poor gain more from microfinance than from more health care or food aid, for example. Therefore, there is a need for all involved in microfinance and development to ascertain what exactly has been the impact of microfinance in combating poverty.

From the foregoing, it is apparent that considerable debate remains about the effectiveness of microfinance as a tool for directly reducing poverty, and about the characteristics of the people it benefits (Chowdhury, et. al. 2004). Sinha (1998) argues that it is notoriously difficult to measure the impact of microfinance programmes on poverty. This is so because money is fungible and therefore it is difficult to isolate credit impact, but also because the definition of ‘poverty’, how it is measured and who constitute the ‘poor’ are fiercely contested issues. Poverty is a complex issue and it is difficult to define, as there are various dimensions to poverty. For some, such as World Bank, poverty relates to income, and poverty measures are based on the percentage of people living below a fixed amount of money, such as US\$1 dollar a day (World Bank 2003).

## **2.7 Risk and risk management by microfinance institutions**

The growth in demand for microfinance services and products in many African countries including Ghana raises questions about sustainability of the industry. In particular, as noted by Bruet (2004), risk management has emerged as one of the key challenges faced by any microfinance institution, whether the institution is an NGO, credit union, finance company or specialized bank. These risks, according to Bruet (2004) vary and require specific strategies to manage. In order to manage potential risks, Ledgerwood (1998) advocates an effective regulatory and policy framework as well as the integration of essential components of institutional capacity building, such as product design, performance measuring and monitoring, and management of microfinance institutions. For microfinance institutions (MFIs), risk management is a daily part of business. The main idea of risk management is well known that risk levels should be directly proportional to expected returns. MFIs which are able to manage these risks will be successful (Oberdorf, 1999). Like all financial institutions, microfinance institutions (MFIs) face risks that they must manage efficiently and effectively to be successful. If risk is not managed well, MFIs will likely fail to meet their social and financial objectives. When poorly managed risks begin to result in financial losses, donors, investors, lenders, borrowers and savers tend to lose confidence in the organisation and current and potential sources of funding will be lost. When investment funds dry up, MFIs will not be able to meet its main objective of providing financial services to the poor thereby losing its core business and thus becoming unsustainable.

Managing risk is a complex task for any financial organisation, and progressively becoming important in a world where economic events and financial systems are linked. Global financial institutions and banking regulators have emphasized risk management as an essential component for financial long-term success. According to Parker (1999), there are two kinds of risks, namely market risk and specific risk (or non-market risk). Market risk by definition is the risk which is common to an entire class of assets or liabilities. Market risk is an investing term referring to the risk an investment security or group of securities will decline in value. This potential for decline in value may come from underlying economic and financial market factors, such as changes in law, changes in interest rates, extreme weather or political environment (Parker, 1999).

Most MFIs invest in medium and long-term financial instruments in emerging markets. These forms of investments have a distinctive set of risk to investors. On the one hand, investors face risks that are inherent to the nature of the microfinance sector, while on the other hand various risks emanate from the country risks typical of developing markets. With regard to country risks, investors need to be aware of the fact that legal, institutional and macroeconomic situations in developing countries differ considerably from those in developed countries. Various forms of risk might emerge for investors due to the lower standards of financial reporting, greater political instability, exchange rate controls, currency devaluations, and liquidity crunches, restrictions on the transfer of private capital or on investments of foreigners.

## **2.8 Types of risks faced by microfinance institutions**

### **Credit risk**

Credit risk is defined as the potential that borrower or counterparty will fail to meet its obligations in accordance with the terms and conditions of the contract. Since most loans advanced by MFIs are unsecured, these exposes to them to a great deal of credit risk. Within the literature, credit risk stands out as a key risk faced by microfinance institutions. This is probably due to the fact that lending has been, by far, the mainstay of microfinance business. This is particularly the case of transition or emerging economies such as those in Africa with the dual challenge of lack of credit facilities for small business firms on one hand, and the incident of bad loans and losses suffered by financial institutions on the other hand. Some scholars (e.g. Santomero, 1997) have argued that in order to minimize loan losses and so as the credit risk, it is essential for financial institutions having an effective credit risk management (CRM) system in place. Given the asymmetric information that exists between lenders and borrowers, financial institutions must have a mechanism to ensure that they not only evaluate default risk that is unknown to them *ex ante* in order to avoid adverse selection, but also that can evolve *ex post* in order to avoid moral hazards. However, a broader definition of credit risk also includes the risk of default by other financial institutions, which have payment obligations to MFIs (Bruet, 2004). This is mainly true with MFIs that continue as NGOs. Such payment obligations may come about as a result of MFIs using such institutions as depository institutions, investment outlets, or for money transfers. Also, such risks can arise as a result of the agency cost arising from services that MFIs have provided to other financial institutions. MFIs therefore incur losses when these institutions are unable or unwilling to meet their payment obligations. However, this element of credit risk tends to be overlooked by MFIs as evident in some cases.

Credit risks are more important today than in the early stages for those MFIs which have accumulated a significant amount of reserves, part of which in turn is kept in other financial institutions in the form of deposits or investments. Aside from generally recognized default risks by clients, another type of credit risk arises when MFI clients deposit their savings in other financial institutions which are weak and not covered by a credible deposit protection scheme. Clients may not have ready access to their funds and thus lose a source of loan repayment for their MFI loan if the bank where they keep their deposits runs into difficulties (Bruet 2004). In such cases, loan recovery rates may suddenly fall. The assets of most MFI portfolios consist of loans which are relatively illiquid and carry the greatest credit risk. As argued by the theory of asymmetry information, it may be inconceivable to differentiate good borrowers from bad borrowers (Auronen 2003), which is likely to lead to adverse selection and moral hazards problems.



**Operational Risk**

Microfinance is an operations-intensive model and weak processes affect internal control and manifest as fraud or other operational failures. Detailed records of the processes and sub-processes can help MFIs identify risks, and the weak links that pose a greater threat of fraud. To detect fraud early and take action, MFIs should have a risk-scoring model, and allocate a score to each and every branch. Taking a holistic view, the model should be based on diverse parameters (Bruet, 2004). Branches with history of fraud should be penalized in the risk-scoring model and the frequency of audit linked to the risk score (GTZ, 2004). This process will shed light on the two key questions: which branch has poor portfolio quality and which branch is witnessing fraud?

**Cash movement risk**

Since all MFI disbursements and collections are cash-based, they face high risk due to the continuous management of cash. This fact is exacerbated in institutions operating in remote locations. If movement of cash is not tracked and checked against demand and collections, it can result in fraud (GTZ, 2004). Such fraud can be mitigated if MFIs impose cash retention limits for branches, and require any deviations to be approved and recorded. Reconciliation cash through Management Information Systems in the branches' bank accounts is important in scrutinizing float and idle cash at every level within the institution.

**Interest rate volatility**

Interest rate volatility is one of the key risks MFIs face today. Interest rates changes on both lending and borrowing rates impact on profits especially in the short term. Increases in cost of funds affect margins adversely, thereby affecting profitability and operational self-sufficiency (GTZ, 2004). With increased competition and pressure to cut interest rates, and the inability of MFIs to pass on interest rate increases to their clients, and proposed regulations on capping margins, interest rate risk will continue to be one of the key threats for MFIs (Bruet, 2004).

**Liquidity risk**

Liquidity risk refers to a disparity of maturities of assets and liabilities. Liquidity risk is the possibility of negative effects on the interests of owners, customers and other stakeholders of a financial institution resulting from the inability to meet current cash obligations in a timely and cost-efficient manner. Liquidity risk usually arises from management's inability to adequately anticipate and plan for changes in funding sources and cash needs (GTZ, 2004).

### **Foreign exchange risk**

Foreign exchange risk is the potential for loss of earnings or capital resulting from fluctuations in currency values. Microfinance institutions most often experience foreign exchange risk when they borrow or mobilize savings in one currency and lend in another (Bruct, 2004). In Ghana, the appreciation of the dollar actually caused many MFIs that were dependent on dollar denominated loans to begin mobilizing local savings in 1999 to reduce the currency mismatch of assets and liabilities (Asiama & Osei, 2007). Some MFIs use interest rates swaps or futures contracts to “lock-in” desirable exchange rate, to protect them from uncertainty.

## **2.9 MFIs’ risk management and risk coping strategies**

Risks in microfinance must be managed in a systematic manner and the importance of risk management will further increase as the industry matures further and microfinance markets become more competitive (Powers, 2005). Risk management is considered the identification, assessment, and prioritization of risks followed by an organized and economical application of resources to reduce, monitor, and check the likelihood and effects of unfortunate events or to maximize the realization of opportunities. As stated by Heffernan (1996) various risk-adjusted performance evaluations have been suggested. These, however, focus on risk-return trade-off. Thus, in each activity, the underlying risks are evaluated and charge consequently for the capital expected to back it. The effective systems that check repayment of loans by borrowers is vital in tackling asymmetric information problems and minimizing the rate of loan losses of any financial institution (Basel, 1999). An effective credit risk management (CRM) requires building an appropriate credit risk (CR) environment; working under a healthy credit lending process; maintaining an appropriate credit administration that necessitate the monitoring process and the adequate controls over credit risk (Greuning & Bratanovic, 2003). These calls for top management within MFIs to ensure that there are comprehensive and authorized guidelines in managing credit risk. Thus, all guidelines should be properly conveyed within the MFI so that all parties involved in CRM understand them. For a sound CRM system in a financial institution, the basis should include the background and allotment of the credit facility and the manner in which a credit portfolio is managed. Screening out potential borrowers is an important activity that has greatly been advocated by, among others (Derban et al. 2005).

Risk management strategies attempt to address risk problems *ex ante*. Risk coping strategies address risk problems *ex post* (Siegel & Alwang, 2001). Risk is the possibility of an adverse event occurring and its potential for negative implications to the MFI. Risk management is the process of managing the probability or the severity of the adverse event to an acceptable range or within limits set by the MFI (GTZ, 2004). A comprehensive approach to risk management reduces the risk of loss, builds credibility in the marketplace, and creates new opportunities for growth. A risk management system is a means of identifying, assessing, and managing the various risks faced by MFIs. A risk management framework serves as a guide for the

management of MFIs to design an integrated and comprehensive risk management system to help them focus and effectively manage their most important risk factors. A risk management framework is therefore a consciously designed system to protect the organization from undesirable shocks (downside risks), and allows the MFI to take advantage of opportunities (up-side risks).

The importance of incorporating risk management strategies in the operations of MFI is gaining considerable recognition (see for e.g. GTZ, 2004; Bruet, 2004). Regulators, donors and the network of practitioners can all help promote these concepts of risk management, but the onus is on the board of directors and managers of the various MFIs to take the necessary steps to implement these risk reducing and risk management tools to ensure profitability and to mitigate losses.

## **2.10 Review of literature on microfinance in Ghana**

There is well documented evidence indicating that the concept of microfinance has always been part of the way of life of the average Ghanaian. The most ubiquitous and indigenous microfinance scheme, known as ‘Susu’ is said to have existed in the country since the early 1900s<sup>5</sup>. The country also boasts of the distinction of being the home to the first Credit Union in Africa, which was established in 1955 by the Canadian Catholic Missionaries<sup>6</sup>. In view of this long history of microfinance activity, there is fairly good amount of scholarly work on the microfinance sector in Ghana. In particular, as a result of a series of financial sector reform policies implemented in recent years resulting in the growth and expansion of the microfinance industry, there is a growing number of scholarly work exploring the link between the growth in the microfinance sector on one hand, and economic development and poverty reduction on the other hand (see for e.g. Adjei, 2010; Asiamah & Osei, 2007; Steel & Andah, 2003). Thus, the existing literature on microfinance in Ghana tends to focus on two broad areas, namely, the nature and scope of regulatory and legislative reforms in recent years to integrate the microfinance sector in the mainstream of economic activities, and how the microfinance sector could spur on economic development and poverty reduction. Steel & Andah (2003) whose work focuses on the changing landscape of the microfinance sector as a result of new legislative reforms, have noted that these

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<sup>5</sup> The ‘Susu’ is a form of informal rotating credit and savings arrangement consisting of a group of community members who regularly make contributions into a pool which is then lent out to one member of the group, who repays it, at which time it is lent out to another group member, and so on until each group member takes a turn borrowing and repaying the pool of savings

<sup>6</sup> See Government of Ghana, “General Background on Global Microfinance Trend”, Ministry of Finance and Economic Planning, Ghana ([http://www.mofep.gov.gh/sites/default/files/pages/microfinance\\_0.pdf](http://www.mofep.gov.gh/sites/default/files/pages/microfinance_0.pdf))

reforms represent the development of a national strategic framework by the Ghanaian authorities to remove impediments to the provision and delivery of financial services to micro and small-scale enterprises.

The second category of the literature as noted above focus on the potentials of the growth in the microfinance sector for poverty reduction and economic development. In Ghana, much like any sub-Saharan African country, poverty is largely a rural phenomenon. Rural poverty is estimated to contribute to approximately 85% of the national poverty<sup>7</sup>. Poverty is highest among self-employed households, farmers and petty traders. According to Adjei (2010), numerous attempts have been made in the past towards poverty reduction in Ghana. Such interventions included the provision of subsidized credit by Governments in the 1950s when the popular belief was that the lack of funds was the ultimate hindrance to poverty reduction. In the 1960s and 1970s the provision of micro-credit mainly through NGOs became the popular theme. Steel & Andah (2004) have noted that the early 1990s saw a formalization of microfinance institutions (MFIs) and finally since the mid 1990s the commercialization of MFIs with microfinance and its institutions becoming a part of the mainstream financial sector. According to the United Nations (2000), indigenous based industrialization should be seen as the process of mobilizing capital towards productive ventures.

In their respective studies on the role of microfinance for poverty reduction, Adjei (2010), and Steel & Andah, (2003; 2004) concluded that since more than 75% of the Ghanaian population lives under \$2 a day, microfinance appears to be the most appropriate means of providing financial services to majority of the Ghanaian population. In furtherance of this objective, between 2001 and 2006, the Rural Financial Services Project (RFSP) estimated at US\$22.96 million was implemented by the Bank of Ghana<sup>8</sup>. The aim of the project was to provide a coherent framework for rural economic transformation and growth. The RFSP aimed at broadening and deepening financial intermediation in the rural areas through effective linkages between the formal rural and micro-finance institutions and informal institutions operating in the rural areas. Thus, microfinance within the Ghanaian context is perceived as a financially sustainable tool to improve the lot of the poor

Access to financial services is imperative for the development of the informal sector and also helps to mop up excess liquidity through savings that can be made available as investment capital for national development (Jain, 1996; Littlefield et.al., 2003; Mahmud, 2003). According the Ghana Microfinance Institutions Network

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<sup>7</sup> See Government of Ghana 2003 *Ghana Poverty Reduction Strategy Paper* (GPRS) [http://siteresources.worldbank.org/GHANAEXTN/Resources/Ghana\\_PRSP.pdf](http://siteresources.worldbank.org/GHANAEXTN/Resources/Ghana_PRSP.pdf)

<sup>8</sup> [http://www.mofep.gov.gh/sites/default/files/pages/microfinance\\_0.pdf](http://www.mofep.gov.gh/sites/default/files/pages/microfinance_0.pdf)

(GHAMFIN), there are more than 233 MFIs operating in Ghana, functioning within various frameworks such as banking institutions, NGOs, Christian Organization and non-banking financial institutions<sup>9</sup>. According to official assessments by the government of Ghana, over 50% of demands for micro-financial services by existing clients are not met due to limited access to lending funds. Also of the total demand for micro financial services, less than 10% is presently being met by the formal and semi-formal MFIs; currently microfinance services in Ghana reach about 300,000 people against the potential 3,000,000 active and bankable poor (see also Adjei, 2010).

From the foregoing, it is clear that microfinance has emerged as an important financing mechanism in the quest by African countries like Ghana to reduce poverty and achieve sustained economic growth (Adjei, 2010; Asiamah & Osei, 2007). Thus the provision of microfinance is not only a source of capital funds to the poor who are generally excluded from the financial services sectors of Ghana's economy, but also as part of the country's overall national development strategy. Despite this growing importance of the microfinance sector and its expected role however, the available literature on microfinance in Ghana tends to focus on the expansion of the sector through legislative reforms that enable the microfinance sector to expand its services and to ensure access to credit and financial services by a bigger segment of the population. There is very little focus of the existing literature on how the growing expectations and expansion in services of microfinance sector in Ghana relate to risks faced by the sector and measures put in place to manage these risks and to ensure that while the needs of the public are met the interests of microfinance service providers are also protected. Thus, while there is sufficient scholarly work exploring the evolution of the microfinance sector from the very early days to the present day with recent series of regulatory reforms as well as the focus on the increasing expectations on microfinance institutions as agents for social and economic change through the provision of credit, there is very little focus on risks faced by MFIs and the measures they adopt to safeguard against such risks. This is the gap that this study aims to fill.

## **Chapter summary**

This chapter reviewed the literature on the history, evolution and importance of microfinance in relation to economic development and poverty reduction. It offered a good understanding of key concepts, terminologies and products of microfinance, risk and risk management by MFIs. The chapter also reviewed the literature on

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<sup>9</sup> See <http://www.ghamfin.org/>

the evolution and the importance of microfinance in Ghana. This section of the chapter is particularly important in view of the main focus of the study on risk and risk management by MFIs in Ghana. The literature review on Ghana thus helps to identify the gaps within the available literature on microfinance in Ghana and thus provides a strong justification for the study and its contribution to both the scholarly literature and current policy debates on microfinance. This chapter is therefore very important in making the case for the remainder of the study in the form of the research methodology and the analysis and interpretation of the empirical data.

## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter explains the research design and methods of the study. Section 3.2 presents sample and sample size of the study. Section 3.3 discusses research methods. Section 3.4 presents data collection instruments while analysis and the interpretation of the data are discussed in section 3.5.

#### **3.2 Sample and sample size**

The study was based on small, medium and large micro-finance companies in Ghana. The sampling frame for the questionnaires administration was all Microfinance Institutions in operation in Ghana. A list of all Microfinance Institutions operating in all the regions of Ghana was collected with their dates of commencement of activities from the Bank of Ghana, Ghana Microfinance Institutions Network (GHAMFIN); and mix markets websites. According to figures from CGAP, there are 51 MFIs in Ghana; Figures from Mixed Markets indicated that there are 78 MFIs whilst MFT showed at total of 90 MFIs operating in Ghana. The questionnaire was distributed to all the identified MFIs of which Forty-Eight (48) responded out of Seventy-Eight (78).

#### **3.3 Research methods**

There is no single acceptable method of conducting research. Many factors contribute to the choice of methodology and these include: researcher's perception about the nature of the social world and what can be known about it (ontology); the type of knowledge and how it can be acquired (epistemology); the purposes and goals of the study; the characteristics and other contexts of the study area; resources available for the study; and the academic background of the researcher (Snape & Spencer, 2003; Creswell, 2003). Research methodology tends to be polarised along the quantitative/qualitative divide because researchers are usually recruited, trained, socialised and rewarded along single methods of social enquiry. Additionally peers and supervisors of researchers show clear preference for one tradition over another. This practice, according to Rao & Woolcock (2003), ensures intellectual coherence and quality control.

The methodological orientation of this study however emanates from the pragmatic perspective in social research. According to Creswell (2003), methodological pragmatists use all methods applicable to understand various aspects of a research problem. The pragmatist perspective to research tends to be problem-centred, consequence-oriented and pluralistic. The appeal of this approach stems from its choice of methods that best

addresses the problem and not the other way round (Patton 1990; Creswell, 2003). Arguing in favour of the pragmatic approach, Patton (1990) advocates for a paradigm of choices that applies methodological appropriateness as the primary criterion for selecting a methodological approach. By implication, pragmatists are likely to employ methodological pluralism or the mixed methods approach to understand social reality if required (Robson, 2002). Reichardt & Rallis (1994) advocate combining qualitative and quantitative methodologies due to the following issues in research: the theory-ladenness of facts; the value-ladenness of enquiry; that reality is multiple, complex, constructed, and stratified; the under-determination of theory by fact (i.e. that any particular set of data is explicable by more than one theory).

In addition, Creswell (2003) makes a claim for methodological pragmatism and succinctly summarizes it as follows: it is not confined to any one system of philosophy of reality and does not see the world as an absolute unity; believes that research takes place in social, economic, political and other contexts; and freedom of choice of method that best suits the problem at hand is important. In sum, the pragmatic methodology usually implies, multiple methods, different worldviews, and different assumptions, as well as different forms of data collection and analysis in the mixed method study' (ibid; 2003; 12).

In keeping to the pragmatist perspective and with regard to the main objectives of this study, which are, to understand the nature of risks faced by microfinance institutions in Ghana and risk management strategies employed, the mixed methods approach is deemed the most appropriate (Hentschel, 1999; Rao & Woolcock, 2003). Understanding the nature of risks and risk management mechanism deployed by microfinance institution is usually achieved through a qualitative method of enquiry. The qualitative research method was useful in providing understanding of the cultural, social, economic, political and institutional contexts within which risks occur. Madey (1982) observed that employing the mixed methods approach in a study has synergistic effects on the three major stages of research design, data collection and analysis. Quantitative research methods were most appropriate in measuring levels of risk and risk impact and to make inferences from the observed statistical relations between those risks and returns (ibid, 2003). The increasing popularity of the mixed methods approach in social science research is due to the recognition that no data collection or analytical method is free from limitation and that biases inherent in any one method could potentially be checked by other methods (Creswell, 2003).

According to Yin (1994), there are five major research strategies used to answer research questions which are experiments, surveys, archival analysis, histories and case studies. This study adopted a case study approach. The study was a case study of risks and risks management practices in microfinance institution in Ghana. Yin (1994) suggests that a case study methodology is a preferred research approach where the research question to be addressed is a type of how-why; control of the researcher over the research is none or very insignificant and



the focus is on a contemporary phenomenon. Because of these differentiating characteristics, no approach could have answered and achieved the research questions and objectives respectively than the case research method. As Yin (1994) notes, cases are not samples and should not be selected as such. In the case study methodology, the focus is not on a limited number of predetermined independent variables, but on factors, which are helpful in explaining the observed phenomena.

### **3.5 Data collection instruments**

The research employed closed and open-ended question data collection method within a questionnaire format. The questionnaires were administered to either head of credit department, loan officers or portfolio managers of each of the forty-eight sampled MFIs. The data gathering techniques used for the questionnaire included organizational variables of the MFIs respondents, products and services they offer, their understanding of risk and risk management, efficiency of risk assessment, methods used to identify risk, efficiency in risk monitoring and controlling system, the efficiency of risk analysis and the efficiency of risk management practices and challenges the MFIs face in managing risk. The organizational variable section of the questionnaire incorporated the following organizational information of the respondents: date of establishment; areas of operations; organizational types; operating status and regulatory frameworks/institutions of the MFIs. Questionnaires with covering letters were delivered to potential respondents at the various branches of the MFIs to eliminate the issue of the unreliability of the postal system. Annual reports, auditor's report and credit risk policy of the various MFIs were thoroughly read and reviewed to serve as checks and balances to ensure accuracy of responds to the questions asked. The study therefore made use of both primary and secondary data. Appendix 3 presents the final structured questionnaire used for the study.

### **3.6 Analysis and interpretation**

The ability to conduct integrated data analysis depends on how the data was collected. For example, if qualitative data was collected based on some element of random sampling, then that data can be analysed qualitatively and also quantitatively (Hentschel, 1999). Perhaps one of the most important stages in the mixed methods approach is the interpretation of findings. Quantitative findings, interpreted in conjunction with qualitative findings, will enhance the understanding of the magnitude and extent to which phenomena are embedded in a certain context. For instance, in a primarily quantitative study the interpretation of the statistical analysis can be enhanced by a qualitative narrative account. In a mainly qualitative research, on the other hand, quantitative evidence can be used to clarify or support the study (Robson, 2002). Another frequently mentioned benefit of the mixed methods approach at the interpretation stage is the use of qualitative methods to conduct follow-up fieldwork to obtain feedback on unexplained and unanticipated outcomes (Bamberger,

2000). Bamberger (2000) strongly advocates the use of statistical analysis to test findings of focus groups discussions, interviews on individuals and key informants.

In assessing risk and risk management of microfinance institutions in Ghana, this study organised the qualitative data according to the nature or type of microfinance institutions and the years of MFI in operation. In interpretation and analysis of the data gathered, a 'Chi-square test for equal proportions', and mean variance analysis was used and explanation of this test is provided in Chapter 5. The chi-squared test for equal proportions is a statistical test used to investigate whether the proportions of responses in each category of answers are equal or whether there are statistically significant differences in the proportions of responses in each category answers. The null hypothesis of the chi-squared test is that the proportion of responses that fall into each of these categories is equal and any differences we observe are due to chance or random variation. If the null hypothesis is true, then we cannot conclude anything based on the responses we observe, as these are essentially due to chance. We reject this null hypothesis of equal proportions at the 5% significance level (95% confidence) if the p-value of the test for the question is less than or equal to 0.05. A p-value of less to 0.05 indicates that the results obtained are statistically significant, implying the dominant perception of respondents regarding the said question.

To measure the variability and spread of responses, mean standard deviation analysis was used to ascertain and assess the differences in the opinions of the respondents while the Chi-Square test was used to establish the statistical significance of responses to each question.

Since the questionnaire comprises of opened, close-ended and coded questions, the analysis of each question depending on which of the three categories outlined above that it falls into, was treated differently. The Chi-square test of equal proportions was used to analyze the risk related questions, whilst the most dominant responses was used to analyze open-ended questions, the mean, median, and standard deviation was used to analyze all responses to the open-ended questions.

The analysis of ranked-order questions are done by allocating varying numerical values to each response. Answers ranked one (1) were scored as ten (10), two (2) scored as nine (9), three (3) scored as eight (8), four (4) scored as seven (7), and five (5) scored as six (6).

## **Chapter summary**

This chapter explained the research design and the research methodology that will be applied in the research problem. Data collection and survey instruments of the study are also described. Finally, the chapter also explained the techniques used for the analysis and interpretation of the data. This chapter is very important in

providing clarity in terms of the specific research methods and instruments adopted in gathering the data and how this data is analysed in order to arrive at accurate answers to the questions posed by the study.

## CHAPTER 4

### RESEARCH FINDINGS

#### 4.1 Introduction

This chapter presents the research findings on the risk and risk management strategies adopted by microfinance institutions in Ghana. Section 4.2 presents facts about the microfinance industry in Ghana. Section 4.3 presents a description of MFIs in Ghana. Section 4.4 presents a descriptive statistics of the closed ended questions. Section 4.5 presents a chi-square analysis of risk management issues and lastly section 4.6 presents and analysis of research the research questions in themes. Respondents to the questionnaire were the loan officers, loan portfolio managers, financial managers and credit controllers of the companies surveyed.

#### 4.2 Facts about Ghana's microfinance

Table 1 below presents the facts about Ghana's microfinance using different sources. I.e. CGAP, Mixed Markets and Microfinance transparency

**Table 1: Key Facts: Microfinance in Ghana**

| Key Facts: Microfinance in Ghana                          |                                 |                      |                                            |                                      |                   |
|-----------------------------------------------------------|---------------------------------|----------------------|--------------------------------------------|--------------------------------------|-------------------|
| <b>By CGAP</b><br>(Consultative Group to Assist the Poor) | No. of MFIs (2011)              | No. of Borrowers     | Borrowers /Population                      | Borrowers/Poor                       |                   |
|                                                           | 51                              | 322,000              | 1%                                         | 4%                                   |                   |
| <b>By Mix Market</b>                                      | No. Of MFIs operating in (2011) | No. Active Borrowers | Gross Loan Portfolio (USD)                 | Average Balance per Borrower (USD)   | Depositors (2011) |
|                                                           | 78                              | 300,878              | 224.6 million                              | 352 million                          | 917,617           |
| <b>By MFT</b><br>(Microfinance Transparency)              | No. Of MFIs operating in (2011) | No. Active Borrowers | Gross Loan Portfolio (Ethiopian Birr, ETB) | % Products with a flat interest Rate |                   |
|                                                           | 90                              | 580,786              | 302.7 million                              | 84%                                  |                   |

Source: MF transparency, mix market and consultative group to assist the poor (CGAP)

There are more MFIs operating in Ghana in 2011 according to MFT than figures reported by Mix and CGAP. Although CGAP has the lowest number of MFIs, it has more borrowers than those reported by Mix. According to CGAP the borrowers per the poor is 4% as compared to 1% borrowers per the general Ghanaian population. The table also shows a substantial difference between the number of active borrowers as reported by mix markets and microfinance transparency.

### 4.3 Description of MFIs in Ghana

The first part of the questionnaire is aimed at understanding the nature of microfinance organizations in Ghana. Table 2 below shows that about 56.25% of the surveyed MFIs have been in business for more than 10 years and 22.92%, 14.58% and 6.25% have been in operations for 3 to 5 years, 6 to 10 years and 0 to 2 years respectively.

**Table 2: Description of respondents by years in operation**

| Description of respondent years in MF operation |           |            |                      |                       |
|-------------------------------------------------|-----------|------------|----------------------|-----------------------|
| Number of Years MFI in operation                | Frequency | Percentage | Cumulative Frequency | Cumulative Percentage |
| 0-2 Years                                       | 3         | 6.25       | 3                    | 6.25                  |
| 3-5 Years                                       | 11        | 22.92      | 14                   | 29.20                 |
| 6-10 Years                                      | 7         | 14.58      | 21                   | 43.78                 |
| 10+ Years                                       | 27        | 56.25      | 48                   | 100                   |

Table 3 below presents the description of respondents by business classes; 33.33% of the surveyed MFIs have a banking license and 66.67% operate without a banking license. Of the 66.67% operating without a banking license, 6.25% of them have 10 or more branches across the country and 60.42% have less than 10 branches operating across the country. Rural banks that engage in micro-lending and Savings & Loan Companies (SLCs) are classified here as MFIs with banking licenses and those without banking licenses are the Non-Governmental Organisations (NGOs), non-bank financial institutions (NBFIs) and Credit Unions (CUs) who operate under the Non-Bank Financial Institutions Act of 2008. The basic difference between MFIs with a banking license and those without a banking license is that those with a banking license are able to accept deposits and mobilize savings from the general public and therefore enjoy economies of scale and scope in their role as intermediaries. However, MFIs without banking licenses introduce competition in the provision of financial services though mostly in a supplementary way they still provide the infrastructure for the allocation of surplus funds to individuals and companies in deficits. A thorough analysis of risk management by microfinance institutions with banking licenses and those without banking licenses is carried out in section 4.5

**Table 3: Description of respondents by business status**

| Description of the business status of respondent MFIs |           |                                     |           |            |                      |                       |
|-------------------------------------------------------|-----------|-------------------------------------|-----------|------------|----------------------|-----------------------|
|                                                       | Frequency | of Which                            | Frequency | Percentage | Cumulative Frequency | Cumulative Percentage |
| Entities with a banking license                       | 16        |                                     | 16        | 33.33      | 16                   | 33.33                 |
| Entities without banking license                      | 32        | Entities with more than 10 branches | 3         | 6.25       | 19                   | 39.58                 |
|                                                       |           | Entities with 10 or less branches   | 29        | 60.42      | 48                   | 100                   |

#### 4.4 Descriptive statistics of closed ended questions

Table 4 below provides the descriptive statistics of variables that are measured using numerical values. The question number from which the variable is obtained is shown in brackets. The mean and median is used to measure the central tendency of the research data whilst standard deviation is used to measure and analyse the distribution of responses around the mean.

**Table 4: Mean, Median, and Standard Deviation**

| Questions                                                                                                                                         | Mean     | Median | Standard Deviation |
|---------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------|--------------------|
| Age of organization (Q1)                                                                                                                          | 12       | 9      | 10.5198            |
| Banking or no banking license (Q2)                                                                                                                | 16       | 16     | 13                 |
| Level at which credit decisions are made (Q3)                                                                                                     | 16       | 12     | 10.5830            |
| Whether risk management function is separate from head office (Q4 )                                                                               | 24       | 24     | 19.7989            |
| Whether institution has a separate treasury management department (Q5)                                                                            | 24       | 24     | 15.5563            |
| Whether institution provides regular reports to funders (Q8)                                                                                      | 24       | 24     | 33.9411            |
| The use of a system for verifying client information (9)                                                                                          | 24       | 24     | 33.9411            |
| Evaluation of risk types in terms of importance, (1 = very important and 5 =not important) (Ranked 10-1, 9-2, 8-3, 7-4, 6-5) (Q12)                | 432.25   | 438    | 36.0867            |
| how well institution is prepared for risk management (1 = well prepared, 3 = not prepared) Level of preparedness ( Ranked 10-1, 9-2, 8-3), (Q12A) | 431.5    | 435.5  | 16.2172            |
| Evaluation of risk reducing tools in terms of importance. 1 = very important and 5 = not important (Ranked, 10-1, 9-2, 8-3, 7-4, 6-5), (Q15)      | 425.8571 | 435    | 41.6670            |
| Ranking of the most threatening risk factors (1) to the least threatening (5) (Ranked, 10-1, 9-2, 8-3, 7-4, 6-5), (Q18)                           | 435.333  | 425    | 40.1829            |
| What the most cost effective ways of lowering risk exposure are (Q19)                                                                             | 9.6      | 8      | 11.0815            |

|                                                                                      |     |     |         |
|--------------------------------------------------------------------------------------|-----|-----|---------|
| The single most important contributing factor to credit risk reduction (Q20)         | 9.6 | 7   | 9.8893  |
| Which 2 (two) factors are the biggest predictors of non-payment of new clients (Q21) | 16  | 2.5 | 22.9869 |
| Which is the most efficient way of optimizing client service (Q22)                   | 9.6 | 6   | 8.8487  |
| What MFIs spend the most money on (Q23)                                              | 12  | 9   | 14.6969 |
| The most efficient options for pro-actively managing risk (Q24)                      | 12  | 8.5 | 14.3061 |
| Which 2 (two) factors are the best predictors of on-time payments by clients (Q25)   | 24  | 19  | 12.8322 |

The table shows that questions 4, 8, 12, 15, 18, and 21 showed the most dispersion. The variability of responses for these questions indicates that the data points are spread out over a large range of values. The variability of responses for question 4 on whether the risk management function of the MFIs was separate from the head office is due to the fact that it demanded a yes or no answer with 20.83% of respondents answering no and 79.17% yes. Question 8 on whether the MFIs provided regular reports to funders required a yes or no answer with all respondents responding with a yes and none at all with a no. This accounts for the variability in the responses to this question. The relative variability of responses to question 12 on the evaluation of risk in terms of importance is accounted for by the 4.28% difference between the most popular choice and the not so popular choice. The wide variability in responses to question 15 on the evaluation of risk reducing tools in terms of importance is due to respondents ranking seven different risk-reducing tools with 11.81% being the lower percentage of respondents choosing one option and 14.99% being the highest percentage of respondents choosing the most popular option. The responses to question 18 on the most threatening risk factor, showed a high variability due to the wide array of choices respondents had to rank. The differences in opinions as to which type of risk is most threatening accounts for the variability of responses to this question. Respondents to question 21 on the two biggest predictors of non-payment by client, thought gender, age and race played no part in predicting non-payment by clients. Whilst 50% of respondents thought the level or disposable income after living expenses and loan instalment is the biggest predictor of non-payment by clients.

#### **4.5 Chi-square analysis of risk management.**

Table 5 below shows the use of the Chi-Squared test for equal proportions was used to test for statistical significance. This statistical test is used to investigate whether the proportions of responses in each category are equal or whether there are statistically significant differences in the proportions of responses in each category. The respondents were divided into two groups, those with banking licenses and those without banking licenses. The classification of respondents into these two groups will help identify any marked difference between the risk management strategies adopted by MFIs with banking licenses and those without banking licenses and the reasons or implications for such difference. The null hypothesis of the chi-square test

is that the proportions of responses that fall into each of these categories is equal and any differences observed is due to chance or random variation. If the null hypothesis is true, then we cannot conclude anything based on the responses observed, as these are essentially due to chance. We reject this null hypothesis of equal proportions at the 5% significance level i.e. at 95% confidence level. If the P-value of the test for that question is less than or equal to 0.05 indicates that the results obtained are statistically significant, indicating the dominant perception of respondents regarding the said question.

**Table 5: Chi-square test for responses to risk management questions**

| <b>Questions</b>                                                                                                                                  | <b>Entities with banking license<br/>N=16</b> |                |                | <b>Entities without a banking license<br/>N=32</b> |                |                |
|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|----------------|----------------|----------------------------------------------------|----------------|----------------|
|                                                                                                                                                   | <b>Chi-Sq</b>                                 | <b>Deg Fre</b> | <b>P-Value</b> | <b>Chi-Sq</b>                                      | <b>Deg Fre</b> | <b>P-Value</b> |
| Evaluation of risk types in terms of importance, (1 = very important and 5 =not important) (Ranked 10-1, 9-2, 8-3, 7-4, 6-5) (Q12)                | 2.7423                                        | 3              | 0.4331         | 6.4781                                             | 3              | 0.905          |
| how well institution is prepared for risk management (1 = well prepared, 3 = not prepared) Level of preparedness ( Ranked 10-1, 9-2, 8-3), (Q12A) | 0.7947                                        | 3              | 0.0507         | 1.5362                                             | 3              | 0.6739         |
| Evaluation of risk reducing tools in terms of importance. 1 = very important and 5 = not important (Ranked, 10-1, 9-2, 8-3, 7-4, 6-5), (Q15)      | 5.88                                          | 6              | 0.4366         | 35.27                                              | 6              | <0.0001        |
| Ranking of the most threatening risk factors (1) to the least threatening (5) (Ranked, 10-1, 9-2, 8-3, 7-4, 6-5), (Q18)                           | 3.44                                          | 5              | 0.6329         | 36.72                                              | 5              | <0.0001        |
| What the most cost effective ways of lowering risk exposure are (Q19)                                                                             | 24.625                                        | 4              | <0.0001        | 28.938                                             | 4              | <0.0001        |
| The single most important contributing factor to credit risk reduction (Q20)                                                                      | 14.625                                        | 4              | 0.0055         | 27.0625                                            | 4              | <0.0001        |
| Which 2 (two) factors are the biggest predictors of non-payment of new clients (Q21)                                                              | 45.6                                          | 5              | <0.0001        | 120.7272                                           | 5              | <0.0001        |
| The most efficient options for pro-actively managing risk (Q24)                                                                                   | 10                                            | 3              | 0.0186         | 44.25                                              | 3              | <0.0001        |
| Which 2 (two) factors are the best predictors of on-time payments by clients (Q25)                                                                | 4.25                                          | 3              | 0.2357         | 17.5                                               | 3              | 0.0005         |

Table 5 indicates that both MFIs with banking licenses and those without banking licenses had P-values greater than 0.05 based on how firms ranked the different types of risk. Therefore the test cannot determine a statistically significant response in terms of which particular risk is or the most importance to them. The response indicated a high proportion of responses received for each category of choices, implying that the



surveyed MFIs considered each and every risk factor as important hence allocated equal importance to all the risk factors they face.

In terms of how prepared the institution is for the different types of risk, the chi-square test is insignificant for each of the two groups of respondents, which indicates that most of the surveyed MFIs allocated close to equal levels of preparedness to each category of risk.

On the question of the tools adopted by MFIs to reduce their risk exposure, the P-value for respondents with banking licenses was 0.4366 which is statistically insignificant compared to a value or less than 0.0001 for respondents without banking licenses. Indicating that respondents without banking licenses allocated close to equal importance to the various risk reducing tools whilst respondents with banking licenses showed a clear indication that effective debt collection is the most important strategy for reducing their risk exposure.

The p-value for the Chi-square test for responses from MFIs with banking licenses came out statistically insignificant (0.6329) when asked to rank the most threatening risk to their MFIs, whilst responses from entities without banking licenses for the same question was statistical significant ( $<0.0001$ ). This indicates that entities with banking licenses had no clear response as to which risk is the most threatening to them whilst those without banking licenses thought regulation of the industry, fraud and the threat of bad debt were the most threatening or all their risk factors.

On the question of what the most cost effective way of lowering their risk exposure was, the P-value for both groups of respondents were statistically significant indicating a clear response. Both entities with and without banking licenses thought a better loan management system was the most cost effective way of lowering their risk exposure.

On the question of what the single most important contributing factor to credit risk reduction was, entities with banking licenses had a P-value for the calculated Chi-square test of 0.0055 and a value less than 0.0001 for entities without banking licenses. The responses for both groups showed statistical significance. Over 50% of respondents in each group believed that an accurate loan affordability calculation is the single most important contributing factor to credit risk reduction.

The p-value for the Chi-Square test for question 21 on the two biggest predictors of non-payment by client were statistically significant for both entities with a banking license and those without a banking license. Indicating a clear response, both groups thought the level of disposable income after living expense and loan instalment; and a client's credit history were the two biggest predictors of non-payment by new clients.

The responses provided by both groups of respondents to the question of what the most efficient way to proactively managing their risk was statistically significant. Both entities with and without banking licenses thought building a relationship with customers in terms of a short-term loan before issuing a long-term loan is the most effective way to proactively manage their risk.

Whilst the p-values for the Chi-square test to question on predictors of on-time payment were statistically insignificant for entities with banking licenses, it was statistically significant for entities without banking licenses. There was no clear response by entities with banking licenses as to what the two best predictors of on-time payment were. Entities without banking licenses thought a correct affordability calculation and work related references were the two best predictors of on-time payment by client.

#### **4.6 Analysis of research questions in themes**

Further analysis of the research responses have been divided into three main themes for easy presentation and analysis of findings. The three themes are as follows: questions with regards to the general information about the respondent MFI, questions on risk and risk management strategies adopted by MFIs, and lastly questions related to the general operations of MFIs in Ghana. The three tables showing the different themes and the related questions are presented as Table 6, 7 and 8.

Table 6 below presents the general information on respondent MFIs. A vast majority of respondents i.e., 56.25% have been in operation for more than 10years. Credit decisions according 58.33% of the surveyed MFIs were made at the branch with head office approval and 25% said credit decisions were made only at the head office whilst 16.67% said credit decisions were made at the branch level. Most of the MFIs surveyed have no separate risk management or treasury function, hence all risk management and treasury decisions are made at the head office. The most dominant policy and guidelines used to guide MFI operations as per the respondents were operational risk management policy and credit risk policy manuals. Most of the surveyed MFIs however did not have set dates for reviewing and revising these manual and indicated that the updated the manuals as and when necessary. When asked what reports are produced by their respective MFIs for banking supervision, the most dominant response was annual reports and a summary of foreign exchange transactions and these reports were updated mostly annually and as and when necessary. All the respondent MFIs admitted to providing regular reports to their funders as a way of presenting them with a snapshot of the financial well-being of the business. Finally in this category of questions, all the responding MFIs do have a way of verifying client information before loan disbursements. This shows that most MFIs are aware of the risk of bad debt and fraud and use the verification of client information as a way of mitigating the risk associated with bad debt and Fraud.

Table 6: MFI general information questions

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|   | Questions                                                         | Frequency                     |                                                             |                                                           |         | Percentage                    |                                                             |                                                             |         |
|---|-------------------------------------------------------------------|-------------------------------|-------------------------------------------------------------|-----------------------------------------------------------|---------|-------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|---------|
|   |                                                                   | 0-2yrs                        | 3-5yrs                                                      | 6-10yrs                                                   | 10+ yrs | 0- 2yrs                       | 3-5yrs                                                      | 6-10yrs                                                     | 10+ yrs |
| 1 | Number of years in operation                                      | 3                             | 11                                                          | 7                                                         | 27      | 6.25                          | 22.92                                                       | 14.58                                                       | 56.25   |
|   |                                                                   | Entity with a banking license | Entity without a banking license with more than 10 branches | Entity without banking license with more than 10 branches |         | Entity with a banking license | Entity without a banking license with more than 10 branches | Entity without a banking license with less than 10 branches |         |
| 2 | Banking or no banking license                                     | 16                            | 3                                                           | 29                                                        |         | 33.33                         | 6.25                                                        | 60.42                                                       |         |
|   |                                                                   | At the branch level           | Only at the head office                                     | At the branch level with head office approval             |         | At the branch level           | Only at the head office                                     | At branch level with head office approval                   |         |
| 3 | Level at which credit decisions are made                          | 8                             | 12                                                          | 28                                                        |         | 16.67                         | 25.00                                                       | 58.33                                                       |         |
|   |                                                                   | Yes                           | No                                                          |                                                           |         | Yes                           | No                                                          |                                                             |         |
| 4 | Whether risk management function is separate from head office     | 10                            | 38                                                          |                                                           |         | 20.83                         | 79.17                                                       |                                                             |         |
|   |                                                                   | Yes                           | No                                                          |                                                           |         | Yes                           | No                                                          |                                                             |         |
| 5 | Whether institution has a separate treasury management department | 13                            | 35                                                          |                                                           |         | 27.08                         | 72.92                                                       |                                                             |         |
|   |                                                                   | Yes                           | No                                                          |                                                           |         | Yes                           | No                                                          |                                                             |         |
| 8 | Whether institution provides regular reports to funders           | 48                            | 0                                                           |                                                           |         | 100.00                        | 0                                                           |                                                             |         |
|   |                                                                   | Yes                           | No                                                          |                                                           |         | Yes                           | No                                                          |                                                             |         |
| 9 | The use of a system for verifying client information              | 48                            | 0                                                           |                                                           |         | 100.00                        | 0                                                           |                                                             |         |

**Table 7: MFI risk and risk management questions**

**Table 7: MFI risk and risk management response**

|     |                                                                                                                                          | Frequency                        |                                         |                                   |                                           |                                  |             |                      | Percentage                        |                                         |                                   |                                           |                                  |           |                      |
|-----|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------------------------------|-----------------------------------|-------------------------------------------|----------------------------------|-------------|----------------------|-----------------------------------|-----------------------------------------|-----------------------------------|-------------------------------------------|----------------------------------|-----------|----------------------|
|     |                                                                                                                                          | Credit Risk                      |                                         | Liquidity Risk                    |                                           | Market/Interest Rate Risk        |             | Operational Risk     | Credit Risk                       |                                         | Liquidity Risk                    |                                           | Market/Interest Rate Risk        |           | Operational Risk     |
| 12  | Evaluation of risk types in terms of importance, (1 = very important and 5 =not important) (Ranked 10-1, 9-2, 8-3, 7-4, 6-5)             | 429                              |                                         | 469                               |                                           | 384                              |             | 447                  | 24.81                             |                                         | 27.13                             |                                           | 22.21                            |           | 25.85                |
|     |                                                                                                                                          | Credit Risk                      |                                         | Liquidity Risk                    |                                           | Market/Interest Rate Risk        |             | Operational Risk     | Credit Risk                       |                                         | Liquidity Risk                    |                                           | Market/Interest Rate Risk        |           | Operational Risk     |
| 12a | how well institution is prepared for risk management (1 = well prepared, 3 = not prepared) Level of preparedness (Ranked 10-1, 9-2, 8-3) | 461                              |                                         | 476                               |                                           | 439                              |             | 470                  | 24.97                             |                                         | 25.79                             |                                           | 23.78                            |           | 25.46                |
|     |                                                                                                                                          | Cr. granting policy              | Cust. affordability calc                | Internal controls                 | Staff train                               | Cr. scoring models               | Debt Collec | Client project eval. | Cr. granting policy               | Cust. affordability calc                | Internal Controls                 | Staff train                               | Cr. scoring models               | Debt Coll | Client project eval. |
| 15  | Evaluation of risk reducing tools in terms of importance. 1 = very important and 5 = not important (Ranked, 10-1, 9-2, 8-3, 7-4, 6-5),   | 415                              |                                         | 470                               |                                           | 397                              |             | 447                  | 13.92                             |                                         | 15.77                             |                                           | 13.32                            |           | 14.99                |
|     |                                                                                                                                          | Customer migration to competi    | Bad debt                                | Regulation of the industry        | Lack of affordable funding                | Internal controls                | Fraud       |                      | Customer migration to competitors | Bad debt                                | Regulation of the industry        | Lack of affordable funding                | Internal controls                | Fraud     |                      |
| 18  | Ranking of the most threatening risk factors (1) to the lease threatening (5) (Ranked, 10-1, 9-2, 8-3, 7-4, 6-5)                         | 419                              |                                         | 480                               |                                           | 416                              |             | 431                  | 16.04                             |                                         | 18.38                             |                                           | 15.93                            |           | 16.50                |
|     |                                                                                                                                          | Conservative cr. Granting pcy    | Better loan mgmt. sys                   | Better debt collecting on arrears | Well educated staff                       | Improved internal controls       |             |                      | Conservative cr. Granting pcy     | Better loan mgmt. sys                   | Better debt collecting on arrears | Well educated staff                       | Improved internal controls       |           |                      |
| 19  | What the most cost effective ways of lowering risk exposure are                                                                          | 10                               |                                         | 28                                |                                           | 8                                |             | 2                    | 20.83                             |                                         | 58.33                             |                                           | 16.67                            |           | 4.17                 |
|     |                                                                                                                                          | The use of credit scoring models | Shorter term loans instead of L-T loans | Smaller loan amounts              | The analysis of credit bureau information | Accurate loan affordability calc |             |                      | The use of credit scoring models  | Shorter term loans instead of L-T loans | Smaller loan amounts              | The analysis of credit bureau information | Accurate loan affordability calc |           |                      |
| 20  | The single most important contributing factor to credit risk reduction                                                                   | 7                                |                                         | 13                                |                                           | 3                                |             | 0                    | 14.58                             |                                         | 27.08                             |                                           | 6.25                             |           | 0                    |

Table 7 above presents the responses to risk and risk management questions. Question 10 on how the MFIs perceived legal, regulatory and political risk in their operations, the most dominant response to this question was inadequate regulation. Not surprisingly, when asked what their individual MFI is doing to mitigate their risk exposure, the most dominant response was that they monitor and advocate for a better regulation of the industry and used proper due diligence analysis to monitor and reduce their exposure to this risk. When asked what risks are inherent in their industry (legal, regulatory and political), the most dominant response was regulatory risk. This response is interesting and on point since in recent times, there have been calls for a revamp of the regulatory framework governing microfinance operations in Ghana. As a result, the bank of Ghana in mid-2012 came up with a provisional list of accredited MFIs<sup>10</sup>. When asked what risks affected the MFIs ability and willingness to extend credit, the most dominant responses were credit risk and liquidity risk. The surveyed MFIs said credit risk erodes investor funds and jeopardizes their portfolio quality and led to more precautionary lending practices whilst liquidity risks the funds available to lend.

MFIs use various tools for the reduction of their overall risk exposure. About 15.77% of respondents said the correct customer affordability calculation is the most important when it comes to reducing their risk exposure. About 15.60% and 14.99% thought effective debt collection and adequate staff training respectively are the most important tools for reducing their risk exposure. When asked what the important contributing factor to credit risk reduction is, 52.08 % of the survey MFIs still thought correct/accurate affordability calculations is the most important factor contributing factor towards credit risk reduction. The response to these two questions indicates that the correct customer affordability calculation is what helps reduce the credit risk exposure of the surveyed MFIs as well as their overall risk exposure.

On questions about the most cost effective risk reducing tool employed by their various institutions, 58.33% indicated that a better loan management system, followed by 20.83% and 16.67% who thought a conservative credit granting policy and a better debt collection on client arrears are the most cost effective way of lowering their overall risk exposure. The response to the last question in that categories about what the respondent MFIs are doing to ensure that their clients are not borrowing from multiple lenders, the most dominant response was to monitor their portfolio quality close and to develop ways to prevent payment fatigue.

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<sup>10</sup> See [http://www.bog.gov.gh/index.php?option=com\\_content&view=article&id=854&Itemid=269](http://www.bog.gov.gh/index.php?option=com_content&view=article&id=854&Itemid=269)

**Table 8: MFI operational questions**

**Table 8: MFI operational questions**

|    |                                                                              | Frequency                                |                                                                          |                                                             |                                             |                                |                                                                           | Percentage                               |                                                                          |                                                             |                                             |                                |                                                                           |
|----|------------------------------------------------------------------------------|------------------------------------------|--------------------------------------------------------------------------|-------------------------------------------------------------|---------------------------------------------|--------------------------------|---------------------------------------------------------------------------|------------------------------------------|--------------------------------------------------------------------------|-------------------------------------------------------------|---------------------------------------------|--------------------------------|---------------------------------------------------------------------------|
|    |                                                                              | Gender                                   | Age                                                                      | Race                                                        | Amount of current loan                      | Credit History                 | The level of disposable income after living expense and loan installments | Gender                                   | Age                                                                      | Race                                                        | Amount of current loan                      | Credit History                 | The level of disposable income after living expense and loan installments |
| 21 | Which (two) factors are the biggest predictors of non-payment of new clients | 0                                        | 0                                                                        | 0                                                           | 5                                           | 43                             | 48                                                                        | 0                                        | 0                                                                        | 0                                                           | 5.21                                        | 44.79                          | 50.00                                                                     |
|    |                                                                              | A real time loan and debtor mgmt. system | A centralized HO function where all the cr. Decisions are made           | A decentralized branch network where Cr. Decisions are made | A call center function                      | A better range of MFI products |                                                                           | A real time loan and debtor mgmt. system | A centralized HO function where all the Cr. Decisions are made           | A decentralized branch network where cr. Decisions are made | A call center function                      | A better range of MFI products |                                                                           |
| 22 | Which is the most efficient way of optimizing client service                 | 6                                        | 2                                                                        |                                                             | 21                                          | 17                             | 2                                                                         | 12.50                                    | 4.17                                                                     |                                                             | 43.75                                       | 35.42                          | 4.17                                                                      |
|    |                                                                              | Staff training                           | An internal audit function                                               | Rewards for fraud tip offs                                  | An independent review of the loan mgmt. sys |                                |                                                                           | Staff training                           | An internal audit function                                               | Rewards for fraud tip offs                                  | An independent review of the loan mgmt. sys |                                |                                                                           |
| 23 | What MFIs spend the most money on                                            | 30                                       | 18                                                                       |                                                             | 0                                           | 0                              |                                                                           | 62.50                                    | 37.50                                                                    |                                                             | 0                                           | 0                              |                                                                           |
|    |                                                                              | A credit scoring model                   | Building a r/ship with cust in terms of a S-T loan b4 issuing a L-T loan | Disbursing only 30 day loans                                | Extensively training all new staff          |                                |                                                                           | A credit scoring model                   | Building a r/ship with cust in terms of a S-T loan b4 issuing a L-T loan | Disbursing only 30 day loans                                | Extensively training all new staff          |                                |                                                                           |
| 24 | The most efficient options for pro-actively managing risk                    | 2                                        | 31                                                                       |                                                             | 0                                           | 15                             |                                                                           | 4.17                                     | 64.58                                                                    |                                                             | 0                                           | 31.25                          |                                                                           |
|    |                                                                              | Loan period                              | A credit scoring model                                                   | Correct affordability calc                                  | Work related references                     |                                |                                                                           | Loan period                              | A credit scoring model                                                   | Correct affordability calc                                  | Work related references                     |                                |                                                                           |
| 25 | Which (two) factors are the best predictors of on-time payments by clients   | 18                                       | 15                                                                       |                                                             | 43                                          | 20                             |                                                                           | 18.75                                    | 15.63                                                                    |                                                             | 44.79                                       | 20.83                          |                                                                           |

The responses of surveyed MFIs to other operational questions concerning the best predictors of non-payment and no-time payment, 50% of respondents thought the level of disposable income after living expenses and

loan instalments is the best predictor of non-payment while 44.79% thought that clients credit history is the best predictor of non-payment and needs to be closely monitored to ensure on-time payment. The response to the predictors of non-payment seems to tie in with the responses on on-time payment were 44.79% of respondents thought a correct affordability calculation is the best predictor of on-time payment. Meaning with the correct affordability calculations clients will be able to have an adequate amount of disposable income after living expenses and loan instalment hence preventing the incidence of non-payment.

The answers to the question of the most efficient way to pro-actively manage risk, 64.58% said building a relationship with customer's through a shorter term loan before issuing a longer term loan is what will pro-actively manage their risk, while 31.25% thought an extensive training of staff on issues relating to risk and risk management is what will pro-actively manage their risk. Tying in the issue of staff training and the distribution of expense items on the respondent MFI budgets, 62.50% said staff training is the most expensive item on their budget while reward for fraud tip offs and expense on an independent review of loan management systems are the items they spend the least money on. The dominant response on the question of what the MFIs did to ensure that clients are not borrowing from multiple lenders respondents said they monitor their portfolio quality closely and work on ways to prevent payment fatigue.

MFIs are concerned about reducing their risk exposure, but they also need to optimize their client service to ensure that they stay in business and maintain client loyalty. In order to do so, 43.75% of respondents said a decentralized branch network where credit decisions are made is what will help them optimize client service whilst 35.42% of respondents thought a call centre function is what will help them optimize client service. These responses indicate that credit approval decisions have to be made efficiently and in a timely manner. After the loan disbursement, however, there has to be a way for the clients to keep in touch with the MFI and vice versa, and a call centre function is what will enable both parties to achieve that. When it comes to dispersion and variability analysis, question 21 is the only one that shows a higher variability. None of the respondents to this question thought gender, age or race had anything to do with predicting client non-payment. However 50% and 44.79% thought the level of disposable income after living expenses & loan instalments and client credit history respectively are the biggest predictors of client non-payment

## **Chapter summary**

This chapter provided the results of the study. The summary of responses to the questionnaire is provided first; then a detailed analysis of these responses captured in a total of Eight (8) Tables, and grouped into unifying theme, is provided in the remainder of the chapter. The results presented in this chapter form the basis for the discussion and conclusion of the study's findings presented in final next and final chapter of the study (Chapter 5).

## **CHAPTER 5**

### **DISCUSSION AND CONCLUSION**

#### **5.1 Introduction**

This chapter discusses the research findings and evaluates whether they were able to answer research questions and whether the findings correspond with or deviate from the available literature. The discussion organized into 5 themes that reflect the objectives of the study. Section 5.2 presents risk factors and microfinance services. Section 5.3 presents ranking of risk factors. Section 5.4 presents management of risk factors. Section 5.5 presents preparedness for risk management. Section 5.6 presents effects of risk factors on service delivery. Section 5.7 discusses areas for further research while Section 5.8 provides a general conclusion of the study.

#### **5.2 Discussion**

The discussion is presented below and organized into five themes as per the research objectives.

##### **5.2.1 Risk factors and microfinance services**

The first primary objective of the research was to ascertain the types of risks faced by microfinance institutions and how these risks impact on the delivery of microfinance services.

The research found out that in terms of risk factors, MFIs in Ghana are more concerned about the risk factors associated with inadequate regulation of the industry: most of respondents believed that the lack of adequate regulation of the MFI industry is the principal risk in their business. This finding supports the call for and the recent attempt by the Bank of Ghana to formulate a comprehensive regulatory framework to oversee the practice and delivery of microfinance service. In 2012 the Bank of Ghana expanded the Non-Bank Financial Institutions Act of 2008 from a single tier to four tiers to cover the activities of Susu<sup>11</sup> companies, Susu

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<sup>11</sup> The 'Susu' is a form of informal rotating credit and savings arrangement consisting of a group of community members who regularly make contributions into a pool which is then lent out to one member of the group, who repays it, at which time it is lent out to another group member, and so on until each group member takes a turn borrowing and repaying the pool of savings



collectors, money lenders and financial NGOs (see Adjei, 2010)<sup>12</sup>. According to Ledgerwood (1998), the Act advocates an effective regulatory and policy framework as well as the integration of essential components of institutional capacity building, such as product design, performance measuring and monitoring, and management of microfinance institutions. As argued by Lederwood (1999), the challenge facing regulators as they consider appropriate regulatory approach to the microfinance sector is complicated by the great diversity of MFIs institutional type, scale of operations and level of professionalism. To be effective however, Ledgerwood (1999) advocates for the need for countries to take into account the variety in institutional types. Consultative group to assist the poor (CGAP 1996) stipulates that at the minimum, when regulating and supervising MFIs, five main issues need to be considered; minimum requirements, capital adequacy, liquidity requirements, asset quality and portfolio diversification.

Another key finding on this, especially in terms of business specific risk, is that liquidity risk was ranked the most important among three other risk factors. When probed further on this response, most of the respondents said liquidity risk resulting from client non-payment affects their returns and operating cost due to the fact that interest on late payments is much lower than the interest rates on funds sourced to make up for the shortfall in their liquidity arising from client non-payment. Fernando (2008) however suggests that though traditionally liquidity risk and credit risk were the main focus by MFIs towards risk reduction, a more comprehensive approach to risk management needs to be adopted due to the interrelatedness of various risk types.

### **5.2.2 Ranking of risk factors**

The second research objective was to find out which risk factor poses the greatest danger to MFI operations. Out of six risks factors, including customer migration to competitors, bad debt, inadequate regulation of the industry, lack of affordable funding, internal controls and fraud, fraud and bad debt were ranked the most threatening to their business operations. This findings parallel the work of Ledgerwood (1999) who found out that the decentralized nature of the activities of MFIs lends themselves to fraud and that the features that make MFIs more susceptible to fraud are: a weak information system, a change in the information system particularly the time during and immediately after the change, a weak or non-existent internal control procedure, a high employee turnover, a situation where loan officers handle cash and when MFIs experience rapid growth. Hook (1995) states that controlling fraud is difficult in MFIs. He pointed out four aspects that are

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<sup>12</sup> See also the following recent notice by the Bank of Ghana:

[http://www.bog.gov.gh/privatecontent/Public\\_Notices/LICENSING\\_OF\\_MICROFINANCE\\_INSTITUTIONS.pdf](http://www.bog.gov.gh/privatecontent/Public_Notices/LICENSING_OF_MICROFINANCE_INSTITUTIONS.pdf)

crucial for successful fraud control: market pricing, adequate salaries for credit officers, simplicity of operations, and accountability and transparency. To reduce the incidence of bad debt, Churchill and Frankiewicz (2006) state that the obvious red flags of bad debt thought may differ depending on the environment and target market, MFIs should help their loan officers develop a gut feeling for who is and is not creditworthy by assisting them in analysing common characteristics of bad borrowers. He went on to say that a systematic review of the files of defaulters will likely identify some patterns that could help loan officers and credit committees avoid repeating their mistakes.

### **5.2.3 Management of risk factors**

The third research objective was to find out measures adopted by MFIs in Ghana to manage the risk factors in their operations. Six key findings were made on this theme based on responses to both coded and open ended questions. First, the respondents believe that to manage the risk of inadequate regulatory framework, they have to advocate and monitor revisions in the regulatory framework governing their operations. According to Ledgerwood (1999), MFIs should be regulated if and when they mobilize deposits from the public. Individual depositors cannot be expected to monitor the financial health of an MFI and necessarily rely on the state to do this. MFI should also be regulated when standards of good practice are clearly needed, whether because there are no practicing organizations or institutions or because existing practitioners are not operating effectively. “When regulation is warranted, it requires coherent prudential guidelines that will further the growth of the microfinance sector while protecting the interest of small savers and supporting the integrity of the financial sector as a whole.” (Barenbach and Churchill 1997). Churchill and Frankiewicz (2006) state that regulatory risk through external can be managed by MFIs joining industry associations or networks who can have an active and even influential voice in shaping public policy. Ledgerwood (1999) contends, however, that although effective external regulation and supervision by regulatory bodies are important to the health of the financial system, no amount of external oversight can replace accountability that stems from proper governance and supervision performed by the owners or financial institutions.

The second finding is on policies used by MFIs to manage their risk exposure. The respondents surveyed indicated that they use risk management policies and guidelines like operational risk manual, credit risk policy, internal audit manual, and credit recovery manual to guide their operations and reduce their risk exposure. A highly standardized, clear and transparent system of operational policies and guidelines contributes to overall efficiency and helps reduce all types of operating risk and errors. (Ledgerwood 1999)

The study also found that all the MFIs surveyed had a system of verifying the credit worthiness of their clients, as a strategy for avoiding fraud and bad debt resulting from loan disbursement to clients who are not credit-worthy. McIntosh & Wydick (2007) cautions however that an on-going borrower who is checked and

continues to receive a loan must have been found to be of high quality, or to have little outside debt. The natural response is to increase the loan size to this borrower, which in turn is likely to result in higher default for that borrower than would have obtained if the loan size had remained at the pre-credit check level. Closely related to this, the respondents also use conservative credit granting policy and better loan management systems to reduce their risk exposure and reduce their operational cost. This finding is in line with Ledgerwood (1999) who advocates for MFIs to be conservative when estimating the debt capacity of a potential target market, because determining clients' debt capacity is an important part of identifying a target market and designing appropriate products and services for that market.

Another measure used by MFIs in Ghana to reduce their credit risk exposure is accurate loan affordability calculations and shorter loan terms. As Von Pischke (1991) suggests that lenders are able to recover loans on schedule only when the repayment capacity of the borrower equals or exceeds debt service, which consists of principal and interest due for payment. These simple, self-evident relationships define the role that credit plays in development and influence the fate of efforts to expand the frontier of formal finance.

#### **5.2.4 Preparedness for risk management**

The fourth research objective was to find out the preparedness of MFIs to manage their risk exposure. When respondents were asked to rank their preparedness for each of the four risk factors (credit risk, liquidity risk, market/interest rate risk and operational risk), they were ranked in equal proportions. GTZ (2000) states that successful microfinance institutions often become over-confident of their future based on their past successes. However, few microfinance institutions have been in existence for more than ten years. This short-time frame is not enough to assess an MFI's long-term ability to survive and respond appropriately to changing risk environments over time. Also many MFIs have become leading financial institutions in part because they have faced little or no competition. As competition increases and time passes, some MFIs will inevitably flounder and lessons will emerge that will emphasize to MFIs the importance of proactive risk management. GTZ (2000) further states that despite short-term successes, MFIs need to prepare for worst case scenarios, such as an economic downturn. MFIs it states should use sensitivity analysis to determine how the institution would fare in face of unforeseen risks, given its current structure and controls, and implement additional measures to ensure its survival.

#### **5.2.5 Effects of risk factors on service delivery**

The fifth research objective was to find out the potential impact of risk management strategies on MFIs' ability and willingness to extend credit to their clientele. This was an open ended question that sought to capture risk factors that affect the service delivery of MFIs. Two patterns of responses emerged: those who believed that credit risk is what affected their willingness and ability to extend credit and those who believed that liquidity

risk is what affected their ability and willingness to extend credit. According to Adjei (2010), “The growth of the microfinance sector in Ghana has been slower than expected because of constraints such as inappropriate institutional arrangements, poor regulatory environment, inadequate capacity, lack of coordination and collaboration, poor institutional linkages, no specific set of criteria developed to categorize clients, channeling of funds by various ministries, departments and agencies, lack of linkages between formal and informal financial institutions, inadequate skills and professionalism, and inadequate capital. Churchill and Frankiewicz (2006) assert that microfinance institutions cannot completely eliminate their exposure to risks. Efforts to do so would be prohibitively expensive. Thus, MFI risk management involves a search for the perfect, though elusive, balance between the costs and effectiveness of controls, and the effects that they have on clients and staff.

### **5.3 Conclusion**

Overall, the analysis shows that MFIs in Ghana are aware of risks associated with their operations and have designed mechanisms to manage specific risks. For effective risk management regime, there is the need to deploy a combination of risk management strategies. The adoption of risk management strategies however has implications for the industry. For instance adopting risk management measures may affect the speed and ease at which credit is extended to clients. Given the role of microfinance sector as a source of credit and finance for poor households and micro businesses alike, there is a need for a robust regulatory system and uniform and institutionalized ways of dealing with risks within the sector. The current system where various operators adopt different risk management strategies may not advance the long-term objectives of all stakeholders, including operators, clients and the government. While there have been recent attempts to transform the microfinance sector through the implementation of specific policy reforms and the passage of specific legislations, more needs to be done to integrate the microfinance sector in the country’s banking and financial system if the gains made so far are to be sustained.

### **5.4 Areas for further research**

While there is a growing academic and policy interest in the microfinance sector in Ghana, more work needs to be done in terms of best practices which can propel the sector to become an integral part of the country’s financial and banking system. Potential areas for further research in relation to the microfinance sector in Ghana include the need to investigate whether or not the caliber of the management and staff of microfinance institutions have any impacts on the performance of the sector including risk and risk management. Also, given the growing integration of the microfinance sector into the mainstream financial and banking sector, it would be important to explore the relationship between microfinance sector and the formal banking sector in terms of staff training, visitation and if there are any lessons MFIs can learn from the formal banking sector. Finally, it would be important to undertake a survey on the clientele base of MFIs with the view to understanding why defaults on loans at the microfinance sector turn to be higher than is the case in the formal banking sector.

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# APPENDIX 1

## Full Survey Response

**Table 4: Full Survey response on coded questions**

**Table 9: Fully Survey Response for coded questions**

|   | Questions                                                                                                  | Frequency                     |                                                            |                                                             |         | Percentage                    |                                                             |                                                             |         |
|---|------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------|-------------------------------------------------------------|---------|-------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|---------|
|   |                                                                                                            | 0-2yrs                        | 3-5yrs                                                     | 6-10yrs                                                     | 10+ yrs | 0- 2yrs                       | 3-5yrs                                                      | 6-10yrs                                                     | 10+ yrs |
| 1 | How long have your organization been in operation                                                          | 3                             | 11                                                         | 7                                                           | 27      | 6.25                          | 22.92                                                       | 14.58                                                       | 56.25   |
|   |                                                                                                            | Entity with a banking license | Entity without a banking license with more than 10 braches | Entity without a banking license with less than 10 branches |         | Entity with a banking license | Entity without a banking license with more than 10 branches | Entity without a banking license with less than 10 branches |         |
| 2 | Into which of the following categories does your organization fit                                          | 16                            | 3                                                          | 29                                                          |         | 33.33                         | 6.25                                                        | 60.42                                                       |         |
|   |                                                                                                            | At the branch level           | Only at the head office                                    | At the branch level with head office approval               |         | At the branch level           | Only at the head office                                     | At branch level with head office approval                   |         |
| 3 | At what level are the credit decisions of you microfinance business being made                             | 8                             | 12                                                         | 28                                                          |         | 16.67                         | 25.00                                                       | 58.33                                                       |         |
|   |                                                                                                            | Yes                           | No                                                         |                                                             |         | Yes                           | No                                                          |                                                             |         |
| 4 | Is you institution's risk management function separate from the head office (Centralized or Decentralized) | 10                            | 38                                                         |                                                             |         | 20.83                         | 79.17                                                       |                                                             |         |
|   |                                                                                                            | Yes                           | No                                                         |                                                             |         | Yes                           | No                                                          |                                                             |         |
| 5 | Does your institution have separate treasury management department in place                                | 13                            | 35                                                         |                                                             |         | 27.08                         | 72.92                                                       |                                                             |         |

|     |                                                                                                                                                              |                   |                          |                   |                |                           |                  |                     |                  |                          |                   |                |                    |                      |                     |                  |  |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------|-------------------|----------------|---------------------------|------------------|---------------------|------------------|--------------------------|-------------------|----------------|--------------------|----------------------|---------------------|------------------|--|
|     |                                                                                                                                                              | Yes               |                          | No                |                |                           |                  |                     | Yes              |                          |                   |                | No                 |                      |                     |                  |  |
| 8   | Do you provide regular reports to your funders<br>What objective is meant to be achieved by such reports                                                     | 48                |                          | 0                 |                |                           |                  |                     | 100.00           |                          |                   |                | 0                  |                      |                     |                  |  |
|     |                                                                                                                                                              | Yes               |                          | No                |                |                           |                  |                     | Yes              |                          |                   |                | No                 |                      |                     |                  |  |
| 9   | Does your organization have a system of verifying client information before loan disbursement                                                                | 48                |                          | 0                 |                |                           |                  |                     | 100.00           |                          |                   |                | 0                  |                      |                     |                  |  |
|     |                                                                                                                                                              | Credit Risk       |                          | Liquidity Risk    |                | Market/Interest Rate Risk |                  | Operational Risk    |                  | Credit Risk              |                   | Liquidity Risk |                    | Market/Interest Rate |                     | Operational Risk |  |
| 12  | Please review the risk types below and evaluate the risk of your institution in terms of importance, (1 = very important and 5 =not important) and           | 429               |                          | 469               |                | 384                       |                  | 447                 |                  | 24.81                    |                   | 27.13          |                    | 22.21                |                     | 25.85            |  |
|     |                                                                                                                                                              | Credit Risk       |                          | Liquidity Risk    |                | Market/Interest Rate Risk |                  | Operational Risk    |                  | Credit Risk              |                   | Liquidity Risk |                    | Market/Interest Rate |                     | Operational Risk |  |
| 12a | how well your institution is prepared for the management of such risk (1 = well prepared, 3 = not prepared)<br>Level of preparedness (Ranked 10-1, 9-2, 8-3) | 461               |                          | 476               |                | 439                       |                  | 470                 |                  | 24.97                    |                   | 25.79          |                    | 23.78                |                     | 25.46            |  |
|     |                                                                                                                                                              | Cr. grant ing pcy | Cust affordabil ity calc | Internal controls | Staff training | Cr. scoring models        | Debt Collec tion | Client project eval | Cr. granting pcy | Cust affordabilit y calc | Internal Controls | Staff training | Cr. scoring models | Debt Colle ction     | Client project eval |                  |  |
| 15  | Please evaluate the risk reducing tools below and evaluate their importance to                                                                               | 415               | 470                      | 397               | 447            | 352                       | 465              | 435                 | 13.92            | 15.77                    | 13.32             | 14.99          | 11.81              | 15.6                 | 14.59               |                  |  |

|    |                                                                                                                                      |                                  |                                         |                                   |                                           |                                  |                                                                    |                                  |                                         |                                   |                                           |                                  |                                                                    |
|----|--------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------------------------------|-----------------------------------|-------------------------------------------|----------------------------------|--------------------------------------------------------------------|----------------------------------|-----------------------------------------|-----------------------------------|-------------------------------------------|----------------------------------|--------------------------------------------------------------------|
|    | your institution. 1 = very important and 5 = not important (Ranked, 10-1, 9-2, 8-3, 7-4, 6-5)                                        |                                  |                                         |                                   |                                           |                                  |                                                                    |                                  |                                         |                                   |                                           |                                  |                                                                    |
|    |                                                                                                                                      | Cust migration to competitors    | Bad debt                                | Regu of the industry              | Lack of affordable funding                | Internal controls                | Fraud                                                              | Cust migration to competitors    | Bad debt                                | Regu of the industry              | Lack of affordable funding                | Internal controls                | Fraud                                                              |
| 18 | Please rank the following risks from the most threatening (1) to the least threatening (5)<br><br>(Ranked, 10-1, 9-2, 8-3, 7-4, 6-5) | 419                              | 480                                     | 416                               | 431                                       | 381                              | 485                                                                | 16.04                            | 18.38                                   | 15.93                             | 16.50                                     | 14.59                            | 18.57                                                              |
|    |                                                                                                                                      | Conservative cr. Granting pcy    | Better loan mgmt. sys                   | Better debt collecting on arrears | Well educated staff                       | Improved internal controls       |                                                                    | Conservative cr. Granting pcy    | Better loan mgmt. sys                   | Better debt collecting on arrears | Well educated staff                       | Improved internal controls       |                                                                    |
| 19 | According to your institutional policy framework, what is the most cost effective way of lowering your risk exposure                 | 10                               | 28                                      | 8                                 | 2                                         | 0                                |                                                                    | 20.83                            | 58.33                                   | 16.67                             | 4.17                                      | 0                                |                                                                    |
|    |                                                                                                                                      | The use of credit scoring models | Shorter term loans instead of L-T loans | Smaller loan amounts              | The analysis of credit bureau information | Accurate loan affordability calc |                                                                    | The use of credit scoring models | Shorter term loans instead of L-T loans | Smaller loan amounts              | The analysis of credit bureau information | Accurate loan affordability calc |                                                                    |
| 20 | Which of the following is the single most important contributing factor to credit risk reduction in your institution                 | 7                                | 13                                      | 3                                 | 0                                         | 25                               |                                                                    | 14.58                            | 27.08                                   | 6.25                              | 0                                         | 52.08                            |                                                                    |
|    |                                                                                                                                      | Gender                           | Age                                     | Race                              | Amount of current loan                    | Credit History                   | The level of dis income after living expense and loan installments | Gender                           | Age                                     | Race                              | Amount of current loan                    | Credit History                   | The level of dis income after living expense and loan installments |
| 21 | Which 2 (two) of the following factors are the biggest predictors of non-payment of new clients in your                              | 0                                | 0                                       | 0                                 | 5                                         | 43                               | 48                                                                 | 0                                | 0                                       | 0                                 | 5.21                                      | 44.79                            | 50.00                                                              |

|        |                                                                                                       |                                       |                                                                          |                                                             |                                             |                                |                                       |                                                                          |                                                             |                                             |                                |
|--------|-------------------------------------------------------------------------------------------------------|---------------------------------------|--------------------------------------------------------------------------|-------------------------------------------------------------|---------------------------------------------|--------------------------------|---------------------------------------|--------------------------------------------------------------------------|-------------------------------------------------------------|---------------------------------------------|--------------------------------|
|        | MFI                                                                                                   |                                       |                                                                          |                                                             |                                             |                                |                                       |                                                                          |                                                             |                                             |                                |
|        |                                                                                                       | A real time loan and debtor mgmt. sys | A centralized HO function where all the cr. Decisions are made           | A decentralized branch network where Cr. Decisions are made | A call center function                      | A better range of MFI products | A real time loan and debtor mgmt. sys | A centralized HO function where all the Cr. Decisions are made           | A decentralized branch network where cr. Decisions are made | A call center function                      | A better range of MFI products |
| 2<br>2 | Which of the following is the most efficient way of optimizing client service in your institution     | 6                                     | 2                                                                        | 21                                                          | 17                                          | 2                              | 12.50                                 | 4.17                                                                     | 43.17                                                       | 35.42                                       | 4.17                           |
|        |                                                                                                       | Staff training                        | An internal audit function                                               | Rewards for fraud tip offs                                  | An independent review of the loan mgmt. sys |                                | Staff training                        | An internal audit function                                               | Rewards for fraud tip offs                                  | An independent review of the loan mgmt. sys |                                |
| 2<br>3 | Of the following items, on which does your company spend the most money on                            | 30                                    | 18                                                                       | 0                                                           | 0                                           |                                | 62.50                                 | 37.50                                                                    | 0                                                           | 0                                           |                                |
|        |                                                                                                       | A credit scoring model                | Building a r/ship with cust in terms of a S-T loan b4 issuing a L-T loan | Disbursing only 30 day loans                                | Extensively training all new satt           |                                | A credit scoring model                | Building a r/ship with cust in terms of a S-T loan b4 issuing a L-T loan | Disbursing only 30 day loans                                | Extensively training all new staff          |                                |
| 2<br>4 | Which of the following are the most efficient options to pro-actively manage risk in your institution | 2                                     | 31                                                                       | 0                                                           | 15                                          |                                | 4.17                                  | 64.58                                                                    | 0                                                           | 31.25                                       |                                |
|        |                                                                                                       | Loan period                           | A credit scoring model                                                   | Correct affordability calc                                  | Work related references                     |                                | Loan period                           | A credit scoring model                                                   | Correct affordability calc                                  | Work related references                     |                                |
| 2<br>5 | Which 2 (two) of the following are the best predictors of on-time payments by clients                 | 18                                    | 15                                                                       | 43                                                          | 20                                          |                                | 18.75                                 | 15.63                                                                    | 44.79                                                       | 20.83                                       |                                |

**Table 5: Full Survey response on open ended questions**

|    | Question                                                                                                                  | Dominant response                                                                                                                                                                        |
|----|---------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6  | What risk management policies and guidelines are in use at your MFI? Include all policies and guidelines                  | <ul style="list-style-type: none"> <li>• Operational risk management policy</li> <li>• Credit risk policy</li> <li>• Risk management systems</li> <li>• Internal audit policy</li> </ul> |
| 7  | What reports are produced by your MFI for banking supervision/central bank on a regular basis                             | <ul style="list-style-type: none"> <li>• Annual Report</li> <li>• Summary of foreign exchange transactions</li> </ul>                                                                    |
| 10 | What risk (legal, regulatory and political) are inherent in the microfinance sector of this country                       | <ul style="list-style-type: none"> <li>• Regulatory risk</li> <li>• Political</li> </ul>                                                                                                 |
| 11 | What is your organization doing to manage or insure itself against the risk mentioned in question 10 above                | <ul style="list-style-type: none"> <li>• Advocating for a better regulation of the industry</li> <li>• Due diligence</li> </ul>                                                          |
| 13 | How do any of the risks affect your ability and willingness to extend credit                                              | <ul style="list-style-type: none"> <li>• Credit risk</li> <li>• Liquidity risk</li> </ul>                                                                                                |
| 14 | Can you please evaluate the level of your institution's risk in relation to the expected returns/Profits                  | <ul style="list-style-type: none"> <li>• Manageable levels</li> </ul>                                                                                                                    |
| 17 | Can other risk reducing tools other than those is question 13 above be used to manage and reduce risk in your institution | <ul style="list-style-type: none"> <li>• Most respondents did not indicate anything</li> </ul>                                                                                           |

# APPENDIX 1

## List of MFIs surveyed

## **LIST OF REGISTERED MFIs IN GHANA**

According to Mix Markets these is the list of MFIs in Ghana. 48 MFIs on this list responded to the questionnaire used in this survey.

1. Adansi Rural Bank
2. Adehyeman Savings and Loans Company Ltd.
3. Advans Ghana Savings and Loans
4. African Gate Financial Support
5. Ahantaman Rural Bank Ltd
6. Akuapem RB
7. AMANSIE WEST Rural Bank
8. Ankobra West Rural Bank
9. Anum Rural Bank Ltd
10. Asa Ghana
11. Asa Initiative
12. Asokore Rural Bank
13. Association of Progressive Entrepreneurs in Development (APED)
14. Atwima Kwanwoma
15. Bangmarigu Community Bank
16. Bessfa Rural Bank
17. Bonzali Rural Bank Ltd
18. Borimanga RB
19. Bosumtwi Rural Bank Limited
20. Buuwuloso One-Stop Rural Bank Ltd
21. Calvary Enterprise Development Foundation (CEDEF)
22. Cedi Finance Foundation (CFF)
23. Centre for Agriculture and Rural Development International (CARD)
24. Christian Rural Aid Network (CRAN)
25. Citi Saving & Loans
26. Daasgift Quality Foundation
27. Dwetire Microfinance
28. East Mamprusi Community Bank
29. EB-ACCION Savings & Loans Company Limited
30. ECLOF Ghana
31. E-Life Development Agency (ELDA)
32. Every Home Care
33. Ezi Savings and Loan
34. Fiaseman Rural Bank
35. First Allied Savings & Loans
36. Ga Rural Bank
37. Gambaga RB
38. G-Life Financial Services
39. Global Access Savings and Loans Company Limited (GASL)
40. Grameen Ghana
41. Initiative Development Ghana (ID Ghana)
42. Innovative finance
43. Juaben Rural Bank
44. Kakum RB
45. Kaseman RB



46. Kintampo Rural Bank Ltd
47. Kraban Support Foundation (KSF)
48. La Community Bank
49. Lower Pra Rural Bank
50. Maata-N-Tudu Association
51. Mepe Area Rural Bank
52. Microfin Plus Ghana Ltd.
53. Midland Savings and Loans
54. MMP
55. Multi Credit Savings and Loans Limited (formerly Garden City)
56. MultiCredit Savings & Loans
57. Naara RB
58. Nandom Rural Bank
59. Nsoatreman RB
60. Nwabiagya Rural Bank
61. Opportunity International Savings and Loans – Ghana (OISL)
62. Otuasekan Rural Bank
63. Pacific savings & loans
64. ProCredit SLC Ghana
65. Sinapi Aba Trust
66. Sonzele Rural Bank
67. South Akim RB
68. St Peters Cooperative Credit Union
69. Toende Rural Bank
70. Trinity Presby Co-op. Credit Union
71. Unicredit ghana ltd
72. Union Rural Bank
73. Upper Manya Kro Rural Bank Limited
74. WA Credit Union
75. West Mamprusi Community Bank
76. Women and Development MFI
77. Women's World Banking Ghana
78. Youth and Social Enterprise Fund

## APPENDIX 2

### Sample of questionnaire



## A STUDY OF RISK AND RISK MANAGEMENT STRATEGIES ADOPTED BY MICROFINANCE INSTITUTIONS

### 1. General Information

1. How long have your organization been in operation?

☐ 0 – 2 year      ☐ 3 to 5 years      ☐ 6 to 10 years      ☐ 10 + years

Other (please specify)

2. Into which of the following categories does your organization fit?

☐ Entity with a banking license  
☐ Entity without a banking license with more than 10 branches  
☐ Entity without a banking license with less than 10 branches

Other (please specify)

3. At what level are the credit decisions of your microfinance business being made?

☐ At the branch level  
☐ Only at the head Office  
☐ At the branch level with head Office approval

4. Is your institution's Risk Management Function separate from the Head Office (Centralized or Decentralized)?

☐ Yes      ☐ No

If yes: Who does the Head of Risk Management report to?

5. Does your institution have separate Treasury Management Department in place?

☐ Yes      ☐ No

If yes: Who does the Head of Treasury report to?

If yes: How is the Treasury Department Structured?



6. What Risk Management Policies and Guidelines are in use at your MFI? Include all policies and guidelines

| Policy Name          | Person Responsible   | Topics/Responsibilities | Last updated         |
|----------------------|----------------------|-------------------------|----------------------|
| <input type="text"/> | <input type="text"/> | <input type="text"/>    | <input type="text"/> |
| <input type="text"/> | <input type="text"/> | <input type="text"/>    | <input type="text"/> |
| <input type="text"/> | <input type="text"/> | <input type="text"/>    | <input type="text"/> |

7. What Reports are produced by your MFI for the Banking Supervision/Central Bank on a regular basis?

| Name                 | Person Responsible   | Main Topics          | Last updated         |
|----------------------|----------------------|----------------------|----------------------|
| <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

8. Do you provide regular reports to your funders?

☐ Yes ☐ No

If yes: What objective is meant to be achieved by such reports?

9. Does your organization have a system of verifying client information before loan disbursement?

☐ Yes ☐ No

Please elaborate



## 2. Risk management questions

10. What risks (legal, regulatory, and political) are inherent in the microfinance sector of this country?

Please elaborate

11. What is your organization doing to manage or insure itself against the risk mentioned in question 10 above?

Please elaborate

12. Please review the risk types below and evaluate the risk of your institution in terms of importance, (1= very important and 5 = not important) and how well your institution is prepared for the management of such risk (1= well prepared, 3= not prepared).

| Importance            | Preparedness          |                           | Comments             |
|-----------------------|-----------------------|---------------------------|----------------------|
| <input type="radio"/> | <input type="radio"/> | Credit Risk               | <input type="text"/> |
| <input type="radio"/> | <input type="radio"/> | Liquidity Risk            | <input type="text"/> |
| <input type="radio"/> | <input type="radio"/> | Market/Interest Rate Risk | <input type="text"/> |
| <input type="radio"/> | <input type="radio"/> | Operational Risk          | <input type="text"/> |
| <input type="radio"/> | <input type="radio"/> | other, please specify     | <input type="text"/> |

13. How do any of the risks affect your ability and willingness to extend credit?

Please elaborate

14. Can you please evaluate the level of your institution's risk in relation to the expected returns/Profits?

Please elaborate



15. Please evaluate the risk reducing tools below and evaluate their importance to your institution. 1 = Very important and 5 = not important

16.

|                                    | 1                     | 2                     | 3                     | 4                     | 5                     |
|------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Credit granting policy             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Customer affordability calculation | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Internal controls                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Staff Training                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Credit scoring models              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Debt collection                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Client project evaluation          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

17. Can other risk reducing tools other than those in question 13 above be used to manage and reduce risk in institution?

Please elaborate

---

18. Please rank the following risks from the most threatening (1) to the least threatening (5)

|                                    | 1                     | 2                     | 3                     | 4                     | 5                     |
|------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Customer migration to competitors' | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Bad debt                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Regulation of the industry         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Lack of affordable funding         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Internal Controls                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Fraud                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

19. According to your institutional policy framework, what is the most cost effective way of lowering your risk exposure?

- ☐ Conservative credit granting policy
- ☐ Better loan management system
- ☐ Better debt collecting on client arrears
- ☐ well educated staff



☐ Improved internal controls

Comments

20. Which of the following is the single most important contributing factor to credit risk reduction in your institution?

- ☐ The use of credit scoring models
- ☐ Shorter term loans instead of long term loans
- ☐ Smaller loan amounts
- ☐ The analysis of credit bureau information
- ☐ Accurate loan affordability calculations

Comments

What mitigating strategies have you put in place to ensure that your clients are not borrowing from multiple lenders?

Comments

21. Which 2 (Two) of the following factors are the biggest predictors of non-payment of new clients in your MFI?

- ☐ Gender
- ☐ Age
- ☐ Race
- ☐ Amount of current loan
- ☐ Credit History
- ☐ The level of disposable income after living expenses and loan installments

Comments



22. Which of the following is the most efficient way of optimizing client service in your institution?

- ☐ A real time loan and debtor management system
- ☐ A centralized head office functions where all the credit decisions are made
- ☐ A decentralized branch network where credit decisions are made
- ☐ A call centre function
- ☐ A better range of microfinance products

Comments

23. Of the following items, on which does your company spend the most money on?

- ☐ Staff training
- ☐ An internal audit function
- ☐ Rewards for fraud tip offs
- ☐ An independent review of the loan management system

Comments

24. Which of the following is the most efficient way to pro-actively manage risk in your institution?

- ☐ A credit scoring model
- ☐ Building a relationship with a customer in terms of a shorter term loan before issuing a long term loan
- ☐ disbursing only 30 day loans
- ☐ Extensively training all new staff

Comments

25. Which two (2) of the following are the best predictors of on-time payments by clients

- ☐ Loan period
- ☐ A credit scoring model
- ☐ Correct affordability calculation
- ☐ Work related references

Comments