

Microfinance in Ghana: A Comparative Study of Performance of the Formal versus Informal Rural Financial Institutions

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Abstract

A growing number of formal commercial banks are increasingly showing interest in financing the vast underserved and untapped market of microenterprises in Ghana. However, the greater majority are still on the fence and are hesitant to venture into microlending. Using field survey data from a wide range of rural financial institutions, we analysed the performance (both in terms of non-performing loans (NPLs) and managers' perception of growth performance) of formal banks, compared to the traditional MFIs, in microlending, emphasizing the incentives and disincentives as well as risk mitigation strategies. The study finds that while the main incentives driving banks into microlending were profitability and changing market conditions, disincentives ranged from a high cost of transaction to a perceived high risk of microentrepreneurs. Further, while asset-based collateral was found not to affect the performance of FIs, we find evidence to support the hypothesis that collateral leads to a reduction of NPLs. However, informal FIs were found to perform better in reducing default rates than the formal FIs. On depth of outreach, whereas FIs with clients dominated by women were more likely to perform better, those located in rural areas were more inclined to have higher NPLs. Finally, while a higher scope of outreach was found to be significant for performance, high lending rates charged by FIs led to higher levels of default rates.

1. Introduction

Recent developments in Ghana's banking industry are changing the face of microenterprise financing in Ghana. Even though recent studies (Helm 2006; Isern and Porteous, 2005) have shown that financing microenterprises can be financially sustainable as well as socially beneficial, mainstream commercial banks, particularly in Ghana, have until recently been absent from microfinancing. Prior to the inception of the country's financial sector reforms in 1988/89, and even some years thereafter, serving the poor and microenterprises was largely perceived to be too risky, costly and a preserve of specialised micro and informal finance institutions. They were noted to serve the upper end of the market, whereas the traditional microfinance institutions (MFIs) exclusively served the lower end creating substantial market segmentations. The underlying reason for this exclusion is amply captured by Rhyne and Otero (1994) as:

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“Mainstream financial institutions cannot easily serve microenterprises.... The practices that most banks use to gain confidence in the quality of loans are expensive. They involve credit checks to gain information about the client’s character, project appraisal to assess the client’s business prospects, and formal collateral. These techniques cannot be used in microenterprise lending. Project appraisal is too expensive, and microenterprises do not keep records. Microenterprises have no established credit rating. They lack marketable collateral. These factors keep commercial banks out of microenterprise lending”.

However, in recent times, anecdotal evidence in the country suggests that the interests of the formal commercial banks in financing the vast underserved (or is it unserved?) and untapped market of microenterprises have been growing by leaps and bounds. The reasons for this turn of event are not far-fetched and can best be attributed to both ‘push’ and ‘pull’ factors. The push factors involve forces which are driving a mainstream bank away from serving only the wealthy households and large firms, while the pull factors are those drawing these banks to go downstream by way of providing microfinancing to microenterprises.

A push factor can emanate from the fact that competition is growing intensely over the last decade as new banks (both foreign and domestic private banks) have entered the market under new banking laws that allow more freedom of entry and liberalised regulatory environment. Consequently, the number of banks has more than doubled since the beginning of the reforms to the current 26. Previous studies (Isern and Porteous 2005; Baydas *et al.* 1998) have, however, shown that the above situation does not only increase competition in banks’ traditional retail markets, but also leads to margin squeeze. Thus, margin can be increased only by finding newer avenues for deployment of their reserved funds. This is thereby forcing forward-looking banks to explore new potential markets, especially microenterprise financing—thanks also to the new universal and retail banking laws passed recently by the Bank of Ghana (BOG). This is so because as part of the ongoing financial sector reforms, the BOG introduced the universal banking concept in the first quarter of 2003 in order to allow banks the flexibility to serve all kinds of customers while allowing them to undertake commercial development, investment or merchant banking without the need for separate licences. The implication for this licence was to bring about increased competition within the banking industry which will, as a matter of survival, require banks to introduce innovate products and improve upon services to attract new customers.

In regard to pull factors, this new-found interest may be due to the increasing awareness of the profitability of micro and small enterprise (MSEs) loans (Jenkins, 2000). In particular, the more widespread diffusion of innovation models being demonstrated by some specialised MFIs (like the Nobel Prize Winner, the Grameen Bank) and the huge success stories of banks in microfinance such as Bank Rakyat Indonesia and BancoSol in Bolivia, all go to partly explain the downscaling-drive to join the fray. Additionally, to the extent that some MFIs and Loans and Savings Companies are

continually being graduated to full-fledged banks across the globe (Helms, 2006), is an indication that microlending is not only profitable, but also sustainable with real growth potentials. Moreover, the informal economy, which mainly comprises microenterprises and employing over 80 percent of the total labour force, according to the 2000 population and housing census in Ghana, presents enormous business opportunities that mainstream banks can no longer afford to ignore. Besides, it is also believed that banks have an edge over specialised MFIs in that they have wide branch networks, funds, technical and human resources to reach-out to the vast unserved MSEs on a larger scale and scope – at even more cost-effectively, profitably and sustainably (Baydas *et al.*, 1998).

The foregoing notwithstanding, the greater majority of these formal banks are still on the fence and are hesitant to venture into microlending. Besides, while some of the existing providers report of growth in performance, in contrast, the Bank of Ghana continually complains of high non-performing loans rates among some of these institutions which engage in retail lending. However, studies focussing on the performance of FIs in microlending, particularly the commercial banks engagements or otherwise, are scant — or have not been well-explored empirically within the context of African rural financial market (RFM). A study on RFM in Africa is relevant because, although there is a significant number of MFIs, their performance and the level of outreach in terms of savings and loan activities are well below those found in the other regions like Latin America and Asia (Pederson, 2003). Moreover, it is believed that African MFIs also have the lowest average loan repayment rates as a result of weak enforcement of laws, and exposure to higher levels of individual and covariant risks, suggesting therefore an unmet potential for increasing the effectiveness of MFIs in Africa.

The issues therefore are as follows: What are the incentives and disincentives for formal banks to engage in microenterprise financing in Ghana? Are the performance (both in terms of Non-performing loans and management own assessment of growth performance) of formal commercial banks in microfinancing different from the traditional MFIs? We believe that understanding the factors underlying the performance of FIs in microfinancing will not only serve as a policy guide for the ‘new actors’ in microlending, but also an important contribution to the microfinance literature and enhancement of microcredit delivery environment, especially in a developing country like Ghana. The purpose of this study therefore is in twofold. First, we explore the performance of formal banks, compared to the traditional MFIs, under a wide range of issues important for microenterprise financing within the context of rural financial market in Ghana. Second, we investigate the determinants of Non-performing loans and growth performance of microlending largely from the perspectives of local branch managers. The rest of the study is organised as follows: section two presents an account of the evolution of microfinance in Ghana. Section three briefly explains the conceptual framework of analysis, presents specification of empirical models, and hypotheses development. Section four describes the data collection procedure and qualitative analysis of the preliminary results. Section five reports and discusses the regression results. The last section six concludes with some policy

recommendations.

2. Evolution of Microfinance and the Rural Financial System in Ghana

“The concept of microfinance is not new. Savings and credit groups that have operated for centuries include the “susus” of Ghana, “chit funds” in India, “tandas” in Mexico, “arisan” in Indonesia....”(CGAP, 2006). Indeed, much like many places of the world, the concept of microfinance in Ghana is not new. In addition to the pre-existing traditional SUSU scheme, which is one of Africa’s most ancient forms of informal banking, the Credit Unions are also believed to have existed in the pre-colonial independence era.¹ Available evidence suggests that the first credit union in Africa was established in Northern Ghana in 1955 by Canadian Catholic missionaries (Steel and Andah, 2003). However, not until the early 1990s when development agenda shifted from one of growth-led to poverty reduction and the importance of microfinance were highlighted, these institutions were largely recognized more as social welfare, cooperative groups other than financial institutions.

In the case of mainstream finance in the country however, in the 1950s, one could say that microfinance was completely absent. The only two foreign banks at the time, namely Standard Chartered Bank and Barclays Bank were seen to favour well-established foreign firms to the neglect of indigenous farmers and small entrepreneurs in granting loans. Consequently, after the country’s independence in 1957, the then Government tried to reverse the trend by redirecting the allocation of financial resources towards domestic investment through direct credit controls and specialised development banks. Subsequently, state-owned development banks such as the National Investment Bank (1963), the Agricultural Development Bank (1965), and the Bank for Housing and Construction (1973), were established to address the financing needs of specific sectors. The rural/community banks were also set up in 1976 as a response to the limited bank penetration into rural areas and to advance credit to farmers and small enterprises in their catchment areas. However, apart from the fact that most of these credits did not reach the poor, often ending up in the hands of wealthy farmers and the rural elites, the policies of direct credit allocation and subsidised lending rates also plunged many of the banks into financial distress with very high non-performing loan ratios. This in part necessitated the introduction of financial sector reforms in the 1988, where the sectoral credit controls and subsidised interest rates were phased-out. Yet, as Aryeetey (1996) points out, these reforms did very little in improving credit to small enterprises.

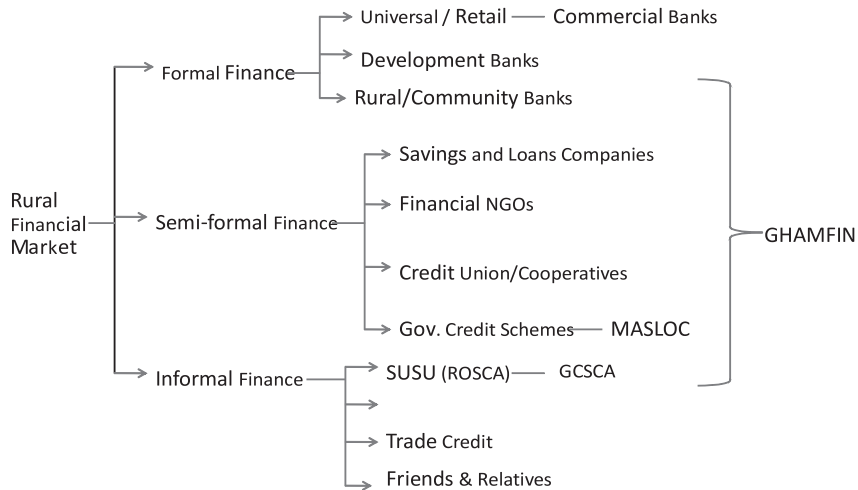
In the meantime, as the World in the 1990s witnessed growing enthusiasms for promoting microfinance as a strategy for poverty alleviation (CGAP, 2006), Ghana also responded, as part of comprehensive financial reforms, by passing the non-bank financial institutions (NBFI) law in 1993. The NBFI law allowed the establishment of different categories of NBFI, including savings and loans companies (S&L), and credit unions (CU). Steer and Andah (2003) argue that the S&L category was

passed as flexible means of recognising, modernising and regularizing three types of pre-existing MFIs, namely 1) transformation of NGOs into licensed financial intermediaries; 2) formalization of actual or potential informal money-lending operations; and 3) establishment of small private banking operations serving a market niche. For example, the first licensing of S&L went to Women's World Banking Ghana (WWBG) in 1994, representing the first transformation of an NGO into a licensed financial institution.

As these new MFIs began adopting innovative lending methodologies from both abroad and the local informal SUSUs schemes, they did not only defy the conventional wisdom of banking the poor, but also demonstrated that MFIs can reach large numbers of the poor and microentrepreneurs while achieving profitability and long-term sustainability status. By the end of the decade, a lot more NGOs had transformed themselves into viable S&L. Today there are about 18 S&Ls, including such big players as ProCredit, Opportunity International, City and Savings and host of others. There are also a number of FNGOs and CUs scattered across the length and breadth of the country and offering a wide range of financial services to MSEs.

The microfinance industry from there on could be said to be blooming. It rapidly evolved and expanded from the relatively narrowed field of microcredit to the more comprehensive concept of microfinance—which includes a range of financial services for poor people and microentrepreneurs, such as savings, money transfers, and insurance. This therefore necessitated the formation of an umbrella organisation, Ghana Microfinance Institutions Network (GHAMFIN) in the late 1990s to self-regulate and educate its members of best practices. The ensuing better performances of the MFIs were gradually becoming clear globally. The commercial banks in Ghana also then began to notice this thriving industry as the competition in mainstream banking became keener. The first bank to openly respond to the challenge of moving downstream to serving the microenterprises was Barclays Bank Ghana Ltd. In 2005, the bank launched the Barclays Micro-banking Project also called 'Dwetiri' (or investment capital) account in collaboration with Ghana Co-operative SUSU Collectors Association (GCSCA). Subsequently, many other banks have also responded by either directly setting up a microfinance unit in their banking hall or creating small specialised auxiliary branch such as the Ecobank's EB-Accion and HFC Bank's 'Boafo'(Helper) Microfinance Services.

In the meanwhile, the government realizing the importance of microfinance in its overall Poverty Reduction Strategy, set up the Microfinance and Small Loans Center (MASLOC) in 2006. Among some of the objectives were to provide soft loans to petty traders and small business operators and to coordinate and enhance all microcredit schemes by government agencies. However, the default rates among beneficiaries are so high to the extent that the Chief Executive Officer of MASLOC, recently indicated that only a little over six percent of about GH¢5 million (\$3.5m) that was disbursed to individuals between 2007 and 2008 had been retrieved, leaving a whopping 93.7 percent in the hands of defaulters.² This and other teething problems within the microcredit industry, in large part,

Figure 1 Structure of Rural Financial System in Ghana

Source: Author

underscore the relevance of the present study. The Figure 1 below shows the structure of the rural financial system providing microcredit to microenterprises in Ghana. As shown, the industry currently exists in three tiers—formal, semi-formal and informal—reflecting different legal and banking regulations that guide their operations.

3. The Conceptual Framework of Analysis and Empirical Specification

3.1 The Conceptual Framework

The literature assessing the performance of FIs in microlending is scarce. Nonetheless, Shreiner's (2002) framework of outreach indicators for discussion of the social benefit of microfinance provides a useful theoretical basis for our analysis. Shreiner's (2002) proposes a framework for outreach in terms of six aspects: worth, cost, depth, breadth, length, and scope. In explaining these indicators, he argues that more socially oriented MFIs, assume in our case to be the semi-formals, can compensate narrow breadth, short length and limited scope with greater depth, while less socially oriented MFIs, like the formal commercial banks, can compensate shallow depth with wide breadth, long length and ample scope. According to this framework, the social or poverty approach targets very poor clients who are very costly to serve. For example, like relief efforts, it measures success by how well it fulfils the needs of the poorest in the short term. In contrast, the self-sustainability or profitability approach targets less-poor clients on the fringes of the formal financial system. In this case, as also observes by Von Pischke (1991), it is like development efforts, it measures success by how well it expands the frontier of the mainstream economy in the long term.

Some studies (Mersland and Strøm 2007; Jenkins, 2000) supporting this framework have

highlighted the underlying trade-off between the social objectives and financial sustainability objectives as the basis for assessing the performance of FIs in microlending. For example, Mersland and Strøm (2007) exploring a study, “Microbanks: Ownership, performance and social Tradeoffs”, although find no significant trade-off among Shreiner’s outreach indicators in explaining differences in financial NGOs and shareholder specialised MFIs, conclude that the indicators nonetheless have the potential of predicting their performances in microlending. Besides, the finding of this study somewhat suggests that the outreach indicators are not peculiar to any type of FIs. Similarly, Aryeetey (2005) finds that the performance of any microcredit programs are related to the extent of outreach, which is measured on the basis of the types of clientele served and the variety of financial services offered. This also includes the value and number of loans extended, savings accounts offered, type of financial services offered, number of branches and village sub branches, percentage of the total rural population served, real and participation of women as clients.

However, while the argument over the last decade among the specialised MFIs has been the need to seek a win-win outcome by minimising this trade-off (i.e., maintaining social objectives, while also ensuring financial sustainability), the formal FIs have until recently not made this an issue. For a commercial bank with a profit motive, financial sustainability/profitability would be the best business case for downscaling. But this could also affect its performance in the industry as it would prevent it to meet the needs of the core poor, who may need microfinance the most (Isern and Porteous, 2005).

In the Figure 2 below, we show a framework of decision tree of how the business objective of a FI may affect its overall performance in the microfinance industry. As shown, different FIs would have different goals—social or profitability—but the key consideration would largely be determined by the varying business competitiveness and regulatory environment. Isern and Porteous (2005) argue that choosing the approach that fits both the bank and the circumstances at the outset is an important factor in future success. Every approach, as they reflect in the outreach indicators—breadth, cost, depth, and etc—, has its particular underlying principle, risk profile, costs, etc. and may eventually affect the overall performance in the industry. However, how these outreach indicators influence the performance in microlending are yet to be tested empirically in the literature. In the section that follows, we specify determinants of performance equation in terms of both NPLs and management’s own assessment of business performance and explain how the various outreach indicators affect these variables.

3.2 Empirical Analysis

To investigate the determinants of performance of FIs in the microlending industry, we specify two separate equations. First, as a FI adopts a particular approach, we measure its exposure to credit risk, or otherwise, by estimating the factors that determine their Non-performing loans rates (NPL). Second, we also investigate a FI’s outlook or stance in the business by assessing management’s own

Figure 2 Conceptual Framework of Performance in Microfinancing



Source: Author

perception about their current growth performance in the microcredit industry. Subsequently, we specify these two determinants equations as follows:

i. Determinants of NPL

Following the studies by Jenkins (2001) and Lancaster (2006), we specify a simple multiple regression analysis using OLS for the determinants of NPL: This is specified simply as:

$$NPL = \beta_0 + \beta_1 FIs + \beta_2 Ownership + \beta_3 Cost + \beta_4 Collateral + \beta_5 Depth + \beta_6 Breadth... + \beta_7 Scope_{ji} + \beta_8 Length + \epsilon \tag{1}$$

Where, the dependent variable, NPL, is the percentage of microloans in arrears (i.e., ratio of microloan losses to the total microloan). The justifications for the explanatory variables have been explained below.

ii. Determinants of Growth Performance

With respect to gauging FIs' performance in microcredit, it is important to stress here again that measurement is based on the local branch managers' perception of growth performance in the industry over the years. To capture this quantitatively, we represent as one(1), if the respondent indicated there has been a significant increase in performance, and zero(0), if he/she thinks performance has stagnated or declined compared to the previous years. This allows us to apply a simple binary response model as logistic regression analysis (or multivariate logit regression), which relates to the odds ratio or the probability of event occurring (Greene 2008) and specify simply as follows:

$$Y_{ji}^* = \beta x_{ij} + \epsilon. \tag{2}$$

Where, Y is defined below in model [3] and x represents a vector of explanatory variables similar to those considered in the NPL model which are explained in the next subsection.

$$Y = \begin{cases} 1, & \text{if } Y^* > 0 \text{ (Increased)} \\ 0, & \text{Otherwise (No increase or decreased)} \end{cases} \quad [3]$$

3.2.1 Explanatory Variables and Hypothesis Development

Beginning with the outreach indicators outlined in the framework, the following paragraphs explain how the indicators are measured and their expected relationship with NPL rates and manager's perception of growth performance (i.e. their overall assessment of their current performance in the microlending industry compared to the previous year). **Cost:** this is defined as the sum of price costs and transaction costs for the borrower. We proxy this by the level of interest rate charged by the FIs. A higher market interest rate a bank charges may affect riskiness of pool of loans within a market characterised by imperfect information that results in two agency related problems — adverse selection and moral hazards (Stiglitz and Weiss, 1981). However, if the rate is subsidised by government, as cited in Jenkins (2000), it may encourage loan default or corruption which, in turn, may result in higher NPL ratios. These two counter arguments therefore leave the expected sign on the cost variable ambiguous.

Depth: Depth of outreach relates to the extent to which microcredit reaches the poor. According to Shreiner (2002), if society has a preference for the poor, then poverty is a good proxy for depth. For example, society likely prefers that a street child or a widow get a given net gain than that a richer person get the same net gain. In his view, simple, indirect proxies for depth are gender (women are preferred), location (rural is preferred), education (less is preferred), ethnicity (minorities are preferred), etc. Thus, we proxy Depth by three main variables, namely proportion of women clients served, rural location and smaller loan size per client. Since reaching poorer clients is relatively more costly as the cost of operating a small loan is often quite similar to that of operating bigger loans (Mersland and Strøm, 2007), and since social goal and the sustainability goal are normally in conflict, we expect higher depth to have adverse effect on both performance and NPL.

Breadth: Breadth of outreach is represented by the number of clients. With higher cost of providing microloans, large volume transactions/clients will lead to lower per unit cost which, in turn, leads to lower interest rate charges, thus a higher growth performance. On the contrary, large volumes of microloan leads to higher monitoring costs and a higher tendency to compromise on loan quality (like subprime lending), thus higher default rates. **Scope:** scope of outreach is the number or types of financial services provided. It is believed that the number of financial products offered to a micro-borrower does not only reflect the degree to which the FI in question is committed to the sector, but also its ability to build client loyalty and relationship banking. This will also lead to reducing information asymmetry and agency problems, and hence lower default rates. This variable takes the

value one(1), if FI offer micro-saving services in addition to lending and zero(0), otherwise. **Length:** length of outreach is the time frame of the supply of microfinance. This is difficult to measure because it relates to the future sustainability and profitability of the MFIs. We therefore employed the number of years a FI has been engaged in microfinance as a retrospective variable. We expect long serving MFIs, all things being equal, to have a positive relationship with growth performance, but negatively related to NPL, since they are more likely to understand the market better than the new comers.³

Further, other determining factors considered are as follows: **FIs:** the type of FIs—formal, semi-formal or informal—, could affect the performance or even the ability of a FI to mitigate risk. The regulated formal FIs usually with sound governance structures, internal controls and wide network of infrastructure as well as high eligibility criteria are more likely to be associated with a positive growth but negatively related to NPL ratio than their counterparts in microlending. **Ownership:** we also control for ownership or main source of funds of the FIs. This takes on the value one(1), if FIs is public/state-owned or donor funded and zero(0), if private. It is a common knowledge that state-owned or donor funded FIs are more socially or developments oriented thereby have less incentive to be profitable or pursue defaulters because of patronage. In contrast, private-owned FIs are profit oriented and thus, would ensure cost-effectiveness and a stricter methodology of controlling loan losses. Public ownership is therefore expected to be less inclined with growth performance and also has a positive relationship with higher NPL ratios. **Collateral:** Even though a stricter asset-based collateral requirement is a sure means of securing loans against default, it may also mean that FIs can only finance bigger projects or wealthier firms thereby affecting its performance in microcredit industry. Thus, collateral (which takes the value one(1), if a fixed or immovable asset is required and zero(0), if no collateral or collateral substitutes such as third party are used instead) will have adverse effect on performance, but may lead to lower NPL. The Table 8 shows a numerated summary and hypothesized signs of all the explanatory variables.

4. Data Sampling and Analysis of the Preliminary Results

4.1 Data Sampling Methodology and Procedure

The data for this study was collected from a field survey on a broad spectrum of financial institutions in the Ashanti region of Ghana between August and September 2009. The study was part of a comprehensive research on microenterprise financing from the perspective of both lenders and microentrepreneurs—emphasizing supply and demand constraints and how to build inclusive financial system. The selection of the sample branches of FIs was done within a stratified framework, based on the type of FI (i.e., Formal, Semi-formal and Informal) and its location. Even though these groupings are important for comparison in our study, it is important to note that within each subgroup the FIs differ in many institutional and economic respects such as structure, mandate and culture.

Furthermore, the location was stratified into three socio-economically important geographical locations, namely Central Business District (CBD), Suburb and Rural localities. The CBD is the downtown of the capital city of the region called Kumasi. This is the second largest city in Ghana, which plays host to a market, believed to be the biggest in West Africa with its attendance brisk business and varying banking activities. The surrounding peri-urban and urban areas were demarcated as suburb because of relatively low economic activities, while ten villages across the length and breadth of the region were selected to reflect income variations. The data collection involved self-administered questionnaires sent to about 100 identifiable financial institutions in our study areas and direct interviews with some branch managers or their representatives.

At the end of the exercise, about 80 set of the questionnaires were returned, although not all were filled up or responded to in its entirety. Some of the responses were dropped because the institutions involved were reluctant to share or disclose certain information even after several follow-ups. This turned up to be a much greater hurdle than was initially anticipated, especially our experience with the formal FIs. However, after cleaning, screening and cross-checking the consistencies of the responses with some reporting institutions, we came up with 67 usable responses. The distribution is as follows: 27 are formals (10 out of this are rural banks), 25 are semi-formals and the remaining 15 are informal FIs. A wide range of data was collected that include organisation's characteristics, perception of risk, mitigation techniques and contract enforcement as well as outstanding loans among others.

As a limitation, we want to stress that since the survey outcome was based on self-reporting and local managers' perspectives, one has to be cautious about interpreting and generalising the findings. In that there is a possibility of self-serving bias where respondents may over emphasise the positive characteristics of their organisation or under estimate their own act of failures or weaknesses. Nonetheless, these biases could not be pervasive since many of the respondents got the understanding that the data was solely meant for academic research and nothing more. Quite a number of them even expressed the desire to see the findings of our study. Moreover, except for the single unit organisations, most of the branches interviewed are parts of larger organisations whose branches span across the country, thereby invariably are more likely to adopt the same lending policies from their respective HQs. Thus, the responses can be said to be a reflection of emerging pattern that provide useful insights into what is the case on the grounds as well as a preliminary information for a larger future study.

4.2 Descriptive Analysis of the Preliminary Results:

4.2.1 Characteristics, Conduct and Performance

The Table 1 shows organisational characteristics of the representative sample of FIs captured in the survey. The results show that almost all the formal and semi-formal FIs are regulated but under

different banking regulations. While the formal FIs are regulated under Banking Act 2004, the semi-formals are registered under a variety of legal Acts because of the differences in their philosophy or business objective, size and capacity. The majority of the informal FIs (60 percent), however, are neither registered nor regulated under any laws of the land. The results further reveal that the rural financial system exhibits different ownership, institutional structures and mandate. In terms of ownership structures, whereas the majority (51.8 percent) of the formal FIs are either Public or Public Private Partnership (PPP), a little less than half (48.1 percent) are private (Corporate) institutions. However, for the semi-formal FIs, ownership is fairly distributed among Financial Non-governmental organisations (36 percent), Private corporate (32 percent) and cooperative such as Credit Union (16 percent) with public and sole proprietorship constituting the least of 4 percent apiece. However, half (50 percent) of the informal financial institutions are sole proprietorship with the majority being either cooperatives (28.6 percent) or private corporate (21.4 percent).

Table 1 Organisational Characteristic of Financial Institutions in the Rural Credit Market

Characteristics	Formal	Semi-Formal	Informal	All
Sampled Financial Institutions	27	25	15	67
% Regulated (Formally Registered)	100	96.0	40	85.1
Year of Establishment (Mean)	27.15	9.54	7.7	16.12
Years in its current location (Mean)	10.9	7.7	6.6	
Branch Network (%)	84.6	64	13.3	60.6
Number of Branches (mean)	27.6	42.4	3.4	33.21
Ownership Structure	%	%	%	%
Public	33.3	4	0	15.2
Private (Corporate)	48.1	32	21.4	36.4
Private (FNGO)	0	36	0	13.6
Public Private Partnership	18.5	8	0	10.6
Cooperative/SHG	0	16	28.6	12.1
Sole Proprietorship	0	4	50.0	12.1
Total	100	100	100	100

Source: Field Survey Data, August 2009

4.2.2 Conduct and Performance

Incentives

The results of the field survey reveal that among the formal FIs, the main motivation or incentive factor explaining the rapid increase in extending services to MSEs is profitability of the sector (39.1 percent), while significant proportion (17.4 percent) attributed it to the changing market conditions and competition (see Table 2). However, a significant proportion, 34.7 percent, is serving the sector because of social objectives either for their development and poverty reduction agenda or in response

to BOG directives/regulations. Nevertheless, almost all the formal FIs that mentioned the latter two motives are rural banks and therefore not surprising. The rural banks, as noted previously, had originally been set-up to provide financial services to the rural farmers and microenterprises within their catchment areas — although this mandate has persistently been overshadowed by their desire to be more commercially oriented and sustainable (Steel and Andah, 2003). In the case of the Semi-formal FIs, the objective varies considerably. Although a greater proportion (41.7 percent) of the MFIs is making loan to MSEs because of their development and poverty reduction objectives, a significant number, 3 out of 10 (30 percent), is making loans due either to the profitability of the sector or changing market conditions. The remaining is being driven by group interests, risk and market diversification or as a response to central bank regulations. Unlike the formal and the semi-formal FIs, approximately 33 Percent of the informal FIs are making loans to serve the interest of their members. Surprisingly, however, the majority (50 percent) claimed they are motivated to serve the sector due to their development and poverty reduction agenda with just about 16 percent doing so for profit.

Table 2 Incentives for Providing Microloans to MSEs among the Rural FIs (%)

	Formal	Semi-Formal	Informal	All
Profitability of the Sector	39.1	16.7	16.7	26.4
Changing Market Conditions and Competition	17.4	12.5	0.0	13.2
Responds to Central Bank or Government Regulation	13.0	4.2	0.0	7.5
Development and Poverty Reduction Agenda	21.7	41.7	50.0	34.0
Corporate Social Responsibility	0.0	8.3	0.0	3.8
Group Interest or Welfare of Members	0.0	8.3	33.3	7.5
Risk and Market Diversification	4.3	4.2	0.0	3.8
Other	4.3	4.2	0.0	3.8
Total	100	100	100	100

Source: Field Survey, August 2009

Disincentives

The results, as reported in Table 3, indicate that among the formal FIs, the major obstacles or disincentives for not meeting demands of loan by the microenterprises are almost equiproportionally distributed among four main factors. The branch managers indicated that high transaction cost (26.1 percent), difficulty in monitoring because of the sector's wider diversity (26.1 percent), and high risk or lack of collateral (26 percent) as well as the current macroeconomic uncertainties (21.7 percent) are the main reasons they are not making loans to the MSEs. These hindering blocks are almost similar to those cited by semi-formals and the informal FIs, except that transaction cost did not seem to be a problem for the semi-formals as it is to the formals. However, dwindling or limited donor or

Table 3 Disincentives for engaging in Microlending (%)

	Formal	Semi-Formal	Informal	All
High Transaction Cost	26.1	0.0	0.0	10.3
Lack of Network or Skill Personnel	0.0	4.2	9.1	3.4
Diverse and Difficult to Monitor	26.1	25.0	18.2	24.1
Highly Risky or Lacking Collateral	26.0	29.2	27.3	27.6
Limited donor or Government Funds	0.0	16.7	18.2	10.3
Macroeconomic Uncertainties/Systemic Risk	21.7	20.8	9.1	19.0
Other	0.0	4.2	18.2	5.2
Total	100	100	100	100

Source: Field Survey, August 2009

government funds were cited as a significant disincentive for the semi-formal FIs.

Definition of Microcredit

The literature on what loan size constitutes a microcredit is not straightforward, but largely depends on a country's level of development and the type of FI delivering it. Essentially, microcredit, also known as microlending, is a subset of microfinance. This has been defined as an extremely small loan given to people to grow tiny businesses or poor households to smooth their consumption.

However, how 'small is small' appears to be relative among different FIs. When we asked FIs to indicate what threshold of loan size below which they consider as microlending, the outcome suggests varying definitions depending on which FI is responding (Table 4). Among the formal FIs, although significant proportion (26.9 percent) defines their microlending to fall between GH¢501–1000, the vast majority (61.4 percent) mentioned GH¢1,001–10,000. However, it is important to note that most of the formal FIs that stated the former are the rural banks. In what is to be expected, whereas the overwhelming majority (72 percent) of the semi-formal FIs' microloan size falls within the range GH¢100–1000, three quarters (75 percent) of all informal loans falls below GH¢ 500.

With regard to average maturity or tenure of microloans, it again appears the Formal FIs grant the longest loan term, although the results show over 50 percent of microloans granted by all the FIs fall within three months to one year. The informal FIs are shown to grant the shortest loan-terms ranging from one month to three months. These results principally suggest two important observations. First, it is an indication that the informal FIs continue to specialize in small and short-term finance. As Nissanke and Aryeetey (2006) point out, the informal operations have been more confined to a traditional form of activities without transforming into higher modes of operation. Secondly, as it relates to the formal FIs, these results suggest that eventhough most of the commercial banks are desirous of engaging in microlending, it appears most of them have still not come to terms with giving small and short-term loans to marginal borrowers.

Table 4 Classification of Microloans (%)

Range	Formal	Semi-formal	Informal	All
1. Below GH¢100	0	8	25	6.8
2. GH¢100–500	7.7	36	50	28.8
3. GH¢501–1000	26.9	36	12.5	27.1
4. GH¢1001–3000	23.1	4	12.5	13.6
5. GH¢3001–5000	23.1	12	0	13.6
6. GH¢5001–10000	15.4	4	0	8.5
7. GH¢10001–20000	3.8	0	0	1.7
Total	100	100	100	100

Note: Exchange rate to a dollar: \$1.00 = GH¢1.42 Source: Field Survey, August 2009.

Formal Banks in Microlending

In what appears contrary to a widespread belief that mainstream formal FIs do not engage in microlending, an overwhelming majority (almost 90 percent) claimed they are engaged in microcredit. Although this result is consistent with Jenkins (2000), who also provided evidence to suggest that the greater majority of formal FIs across the globe are indeed involved in microlending, when we compared this to the percentage of their total loan portfolio in this category, it is far less than a quarter. On the contrary, the semi-formal and informal FIs, as expected, have 56.9 percent and 68.6 percent of their loan portfolio respectively in their microcredit categories. However, one may argue that 20 percent of GH¢50 million is obviously bigger than 60 percent of say GH¢5 million. This is because the combined assets of both semi-formal and the informal FIs are known to be far less than 10 percent of the total assets of the formal FIs in Ghana. It is also noteworthy that approximately 80 percent of FIs who were not engaged in microlending indicated they were planning to enter the fray in not too distant future.

In terms of breadth, the number of clients in the three months preceding the survey reflects a more modest outreach by all the FIs. Although the formal FIs have just an average of 2358 microloan applicants per the period, only about 5 in 10 (54 percent) were approved. In contrast, for the semi-formals, which received almost five times that of the former, more than 62 percent were approved. This result reaffirms the earlier findings that the formal FIs (compared to the specialised MFIs) still have difficulty reaching micro-clients. Similar pattern again emerges when we considered the depth of outreach. The results reveal that only 32 percent of the formal FIs have their main clients among women as against 56 percent for the semi-formals and 70 percent for the informal FIs.

Interest Rate Charged

Concerns about high lending rates within the microfinance industry in Ghana are rife in recent times. These concerns remain valid when we compared the high interest rates and commission/fees charged on microcredits with those of mainstream credit market. Evidence, as provided by our field survey at the time, shows that whereas mainstream lending rates hovered around 2.5–3 percent per

month (averaging about 36 percent p.a.), those of microcredits were within the range of 2–8 percent a month and an annualised average of 45 percent across all FIs. The results (Table 5), however, show considerable wide variation between the different segments of FIs. The FNGOs and S&Ls charged interest rates that were far higher than those charged by the formal FIs. Most of these interest rates ranged from 4–9 percent per month and even much higher (6–10 percent a month) among the informal FIs. There is however exceptions, particularly the rates charged by some Credit Unions and government or donor sponsored subsidised microcredit projects. These were quite low. Their interest rates ranged between 20–30 percent p.a. due, in large part, to their organization deemed as cooperative societies or with a social welfare focus. These variations in lending rates, according to the FIs, depend on the level of risk they associate with borrowers.

Table 5 Selected Indicators of the Performance of FIs

	Formal	Semi-formal	Informal	All
FIs Engage in Microenterprise Finance (%)	88.9	96.0	46.7	82.1
Years of Engaging in Microlending (Mean)	14.8	6.8	5.6	10.0
% of microloan Portfolio	23.43	56.9	68.6	50.45
Number of Micro Application	2158.3	13698.3	137.3	7327.6
Percentage Approved (%)	54.7	62.2	60.5	58.8
Processing Duration (weeks)	2.4	2.0	1.9	2.1
Charging Different Interest Rate (%)	45.8	20.8	11.1	29.8
Annualised Interest Rate (%)	35.1	47.0	62.6	45.7
Provision of Technical Support (%)	90.9	91.7	53.8	83.1

Source: Field Survey, August 2009.

4.2.2 Risk Mitigation Techniques

Screening and Monitoring

We asked branch managers to indicate which microcredit methodology presents the greatest challenge and cost. For the majority (50.1 percent) of the formal FIs, these are loan applicants information gathering, screening and approval; although contract enforcement was also significantly cited. However, in the case of the semi-formal FIs, their biggest concern was loan monitoring (40 percent), which incidentally happened to be the least (15.4 percent) of worries for the informal FIs. The latter supports the view that informal lenders have little need to monitor loans explicitly because of free information flow in their operating circles as a result of personal ties and proximity (Udry, 1990).

Collateral Requirement

The Table 6, which presents the risk mitigation techniques used by FIs, shows that even for microloans the commonest technique use to secure loans is collateral, albeit type varies considerably.

Whereas all (100 percent) the formal FIs required some forms of collateral before granting loans, not all of the semi-formals (62.5 percent) and informal (55.6 percent) FIs actually do. For those who do not require collateral, two main explanations were offered. First, it is because their clients are members of their association or unions and second, because of their socially or poverty reduction objective. Even if they require any collateral at all, it is usually a movable assets such as vehicles or cattles or some durable household appliances.

Table 6 Collateral Type and Reason for Not Requiring Collateral (%)

	Formal	Semi-formal	Informal	All
Collateral is required	100	62.5	55.6	77.6
Collateral Type				
Co-signer or third party guarantor	35.3	37.5	50.0	37.8
Fixed assets for collateral such as land and building	29.4	18.8	25.0	24.3
Motorable Assets such as (Livestock, Vehicle etc.)	0.0	18.8	0.0	8.1
Minimum balance or savings threshold	29.4	25.0	0.0	24.3
Automatic salary deductions or proceeds from sales	5.9	0.0	0.0	2.7
Other	0.0	0.0	25.0	2.7
Total	100	100	100	100

Source: Field Survey, August 2009.

Collateral Substitutes

We found evidence to suggest that the demand for asset-based collateral such as land and buildings is becoming less popular. Collateral substitutes or joint liabilities such as a third party guarantor or group lending are fast catching up with almost all the FIs, especially with the formal and semi-formal FIs. For example, more than 60 percent of the formal FIs either require a potential microlender to provide a third party guarantor or a minimum balance as a compulsory up-front savings of say 20 percent that is retained as a security before loan is granted. According to some branch managers interviewed, microloans secured with personal guarantors have long proven to be of higher quality and much less a struggle to enforce repayment. This is because they pay particular attention to the person's proven personal integrity and financial worthiness. Moreover, the person's minimum saving balance at all times with the bank or other FI should be adequate to offset the loan sum, in case the client defaults in payment. Another technique found to be important for reducing microcredit risk or offsetting borrowers' lack of collateral was graduated lending and termination incentives (or dynamic incentives), although mainly applied by the semi-formal FIs. Despite the belief that a micro-borrower is keen to maintain access and are more likely to repay promptly as long as a reliable promise of a bigger loan exists in future, a good number of the managers interviewed, maintained that

it, nevertheless, limits their flexibility and puts pressure on them to increase the loan size, even when they have limited loanable funds.

4.2.3 Non-Performing Microloan and Perception of Growth Performance

Banks in Ghana continue to grapple with their loan quality in the midst of macroeconomic uncertainties, keen competition and relentless efforts to expand operations as well as lack of secured enforcement regime. Recent report by BOG on non-performing loans to gross loans (NPL) for the year 2009 shows a rising ratio (19.9 percent)⁴ compared to the recent past. This, according to the central bank, is worryingly high that requires urgent attention. However, this deterioration of loan quality in the year has largely been attributed to volatile macroeconomic environment as well as the increased lending to the retail sector such as personal and small loans to enterprises. The latter is said to have grown the most as part of most banks' growth strategy. However, our field survey reveals formal banks' NPL rate (13.6 percent) is a little lower than the national and even much lower than those in the semi-formal FIs (18.7 percent). In the case of overall perception of growth performance in microlending, over 62 percent of branch managers of formal FIs indicated they have experienced growth compared to the previous year (Table 7). However, over 37 percent has either stagnated or declined over the period. Meanwhile, approximately 67 percent of the semi-formals FIs which, even though, reported of high NPL ratios, experienced growth with a quarter declining nonetheless. However, just about half of the informal FIs experienced growth performance, although it reported the least (10 percent) NPL. The overarching question here is what are the drivers of these variations in perceived growth performance and the level of NPL ratios among the FIs. It is therefore interesting and important that we undertake a further empirical investigation to determine the underlying factors.

Table 7 Non-Performing Loans and Perception of Growth (%)

	Formal	Semi-formal	Informal	All
Non-Performing Loan (Arrears)	13.6	18.7	10.2	15.2
Growth Perception:				
Increasing	62.5	66.6	57.1	63.7
Decreasing	25.0	25.0	0.0	21.8
No Change	12.5	8.4	42.9	14.5
Total	100	100	100	100

Source: Field Survey, August 2009

Table 8 Description of Explanatory Variables and their Hypothesised Signs

Variable	Description	Percentage (Mean)	Hypothesized Sign	
			Growth Performance	NPL
FIs	= 1, if, formal; 2= semi-formal, 3= Informal	40.3*	+	-
Ownership	= 1, if FIs is public-owned or donor funded and 0, if private.	37.9	-	+
Cost	Average lending rate by a FI	(45.7)	-	+
Depth	= 1, Female, 0 male	47.5	-	+
	= 1, rural location, 2= CBD, 3= location	32.8*	-	+
	= 1, if loan size is (< Gh¢ 500), 0; otherwise	34.4	-	+
Breadth	Number of clients (Natural log)	(4.4)	+	+
Scope	= 1, if FI micro-saving services in addition to lending and zero, otherwise.	86.0	+	-
Length	Number of years a FI has been engaged in microlending as a retrospective variable (natural log)	(2.3)	+	-
Collateral	= 1, if a fixed or immovable asset is required and 0, if no collateral or collateral substitutes such as third party or upfront payment	31	-	-

Note: The figures with asterisk (*) refer only to the value 1 Source: Field Survey, August 2009

5. Regression Results

The regression results, as presented in Table 9 below, show logistic regression estimates of the drivers of managers' perception of growth performance and OLS regression of determinants of NPL in microenterprise lending. The model fitting information results all show the equations were well specified and appropriate, whereas the regression results are generally consistent with the microfinance literature. The coefficient on the collateral variable is statistically significant with a negative sign in the NPL model, but it is insignificant in the performance model. This result suggests that where a FI demands fixed asset as collateral to secure microloan, it is associated with lower or reduction in NPL ratios. However, with lack of a well-functioning secured credit regime and credit scoring bureaus, this finding may imply that FIs, especially the formal ones, will continue to prefer microloans collateralised with fixed assets, but which will lead to exclusion of a lot more microentrepreneurs.

In regard to ownership type, whether a FI is publicly or privately owned does not appear to influence performance nor lead to a reduction in NPL. The variable in both models is insignificant, which provides support to a similar conclusion reached by Mersland and Strøm (2007) that ownership type has no effect on the performance in microlending. Likewise, whether a FI is regulated (i.e., formal finance) or unregulated appears not to have any significant impact on performance in

microlending. However, informal FIs appear to perform better in reducing loan losses than the formal FIs. The latter result reveals a significantly negative relationship between informal FI and NPL. This is, however, not surprising since it confirms the preliminary results of our survey that the informal FIs in the country are more close to their clients and often adopt simple lending facilities, frequent repayment schedules and social sanctions to enforce contracts. The results further reveal that FIs which have long been engaged in microlending are more likely to have a higher growth in performance than their counterparts who are new in the industry. On the issue of breadth of outreach, the results show that the number of clients has no significant influence on performance. On the contrary, greater breadth has significant positive impact on NPL. This suggests that larger number of clients a FI serves increases high rate of NPL. Even though larger volume may mean risk diversification, it is also an indication that large volumes of microloans may bear greater risk and that unbridled advances in small loan without accompanying effective risk mitigation strategies is a recipe for a failure.

Another outreach indicator, depth, however, presents mixed but interesting results. While depth, proxy by women clients, has a significant and positive relationship with performance, the rural and the small loan size variables are only significant in the NPL model, albeit with opposite signs. The former result suggests that MFIs with clients dominated by women are more likely to perform better, although no evidence of it leading to a reduction in NPL. On the contrary, for depth as it relates to rural outreach, the result shows a positive relationship with higher NPL rates. This means that FIs located in rural areas are more inclined to have higher NPL rates. The results further reveal that FIs in the suburbs, compared with those in CBD, are less likely to perform better. However, depth, as it relates to small loan size, has a negative and significant relationship with NPL rates. The implication of all these various outcomes for depth is that while aspect of the results is consistent with the evidence that MFIs with greater depth of outreach but with tailor-made products to suit clients needs will be successful in meeting the twin objectives of financial sustainability and social performance (Biggar, 2009), greater caution has to be exercised, especially when dealing with the rural clients.

The result on scope of outreach shows a statistically significant and positive relationship with performance but insignificant with NPL rates. This suggests that FIs that offers a variety of micro financial products such as saving services are more likely to perform better. This supports our hypothesis that varying products offered to micro-clients are more likely to lead to client loyalty or relationship banking, less dropout and thereby a higher growth performance. Regarding lending rates charged by FIs, although a higher lending rate does not appear to affect performance, the result indicates an adverse effect on NPL rates. The positive significant outcome suggests that too high a lending rate charged by FIs leads to higher default rates.

Table 9 Regression Results for Determinants of Growth and NPL

Variables	Logistic Regression Model (Performance)		OLS Regression Model (NPL)	
	Estimates	Std Errors	Estimates	Std Errors
Breadth of Outreach	-0.066	0.215	0.014***	0.004
Collateral Type (Fixed Assets)	0.897	1.057	-0.066***	0.019
Cost (Lending rate)	5.951	5.037	0.233**	0.088
Depth (Female)	2.497**	1.044	0.021	0.018
Depth (Loan Size < GH¢ 500)	-0.885	0.992	-0.030*	0.018
Dept (Rural)	-0.333	1.138	0.042**	0.020
Suburban	-2.185*	1.145	0.022	0.019
Scope of Outreach (savings)	4.117**	1.496	0.009	0.021
Semi-Formal Finance	2.039	1.427	0.001	0.024
Informal Finance	-0.777	1.893	-0.058*	0.033
Public Ownership	0.960	0.854	0.0012	0.017
Years in Microlending	1.055**	0.522	-0.009	0.009
Constant	-8.622**	3.546	0.002	0.054
- 2 Log likelihood		43.142		
Cox & Snell R Square (Adjusted R)		0.413		(0.576)
Durbin-Watson				1.76
Overall Percentage Correct		82.7		
No. of Observation		52		52

Note: * = 10% Significant; ** = 5% Significant; *** = 1% Significant

Formal Finance is set as the reference category to the other FI—Semi-formal and Informal
CBD is set as the reference category to the other locations—Rural and Suburban

6. Conclusion and Implications

The study has attempted to investigate the incentives, disincentives and the performance of mainstream formal FIs vis à vis semi-formal and informal FIs. Specifically, the study examined factors that determine FIs' perception of growth performance and Non-performing loans (NPL) relating to microlending. Using structured questionnaires to gather data, mainly from the perspectives of local branch managers among a broad spectrum of FIs in Ghana, both descriptive and quantitative techniques were adopted to analyse the set objectives. The descriptive analyses of the survey results, though preliminary, emphasise four important findings. First, contrary to a widespread belief that mainstream formal FIs in Ghana are absent from microlending, an overwhelming majority claimed otherwise, although evidence suggests many still apply similar lending rules and policies to microlending as in their core lending activities. Second, the formal FIs, as commercially oriented as they are, indicated their main incentives for engaging in microlending are profitability and changing market conditions. On the contrary, the semi-formal FIs endeavour to strike a balance between profitability and social objectives, though disproportionately. Third, the major obstacles or disin-

centives for not making microloans are almost equiproportionally distributed among four main factors, namely high transaction cost, difficulty in monitoring because of the sector's diversity, and high risk of the sector as well as macroeconomic uncertainties. Fourth, although almost all the formal FIs require collateral, the use of asset-based collateral is becoming less popular. Collateral substitutes or joint liabilities such as third party guarantor and group lending are fast catching up with almost all the FIs, especially with the formal and semi-formal FIs.

The study also reports several other significant findings from the regression analyses. One important findings of this study is that while asset-based collateral was found not to affect the performance of FIs in microlending, we found evidence to support the hypothesis that asset-based collateral leads to a reduction in NPL rates. The study further finds that consistent with other studies, ownership type has no influence on microlending performance. However, informal FIs were found to perform better in reducing default rates than the formal FIs. Moreover, on depth of outreach, while FIs with clients dominated by women are more likely to perform better, FIs located in rural areas are more inclined to have higher default rates. Finally, whereas a higher scope of outreach was found to be significant for growth in performance, high lending rates charged by FIs was found to be counterproductive as it leads to higher levels of default rates.

We therefore conclude that as a growing number of commercial banks are downscaling to engage in microlending, it is vital they adapt their financial products and methodologies to the needs of microenterprises. They should also adopt new technological platforms that are more suited to microlending to ensure better performance. However, we believe that to better achieve an aggregate performance and build a more inclusive financial system in the country, the formal FIs should foster effective partnerships with the traditional MFIs and the informal SUSU operators. Additionally, as the overwhelming majority (about 85 percent) of branch managers interviewed were of the opinion that availability of credit scoring bureaus and collateral registries will greatly broaden access through enhanced client information gathering and risk management, the establishment of such institutions in the country is long overdue. Furthermore, in order to assuage the fears of the risk-averse bankers, there is the need for demonstration effect in the country supported by either government or donor agencies. This would provide an opportunity for such banks to take note of best practices and potential returns in microlending. This, coupled with effective contract enforcing legal and regulatory framework, will not only promote healthy competition in the sector, but also drive down delivery cost - which will in turn reduce the microlending rates.

Note

- 1 As a long time traditional saving and credit scheme, the SUSU collectors offer very flexible financial services, which are patronized mainly by small traders at the market or micro-entrepreneur. Accepting an agreed upon

amount and intervals for collection from a saver, the SUSU collector makes his daily rounds and collects a similar amount over a month rolling period from each of his customers. At the end of the period, the collector pays out lump sum or a large one-time payment of money to the customers, while retaining one day's payment from each customer for his services.

2 see Daily Guide, Saturday, 20 March 2010 issue

3 The last, but not least outreach indicator is *Worth*, which is defined as clients' willingness to pay. However, this is omitted in the analysis as it is difficult to measure. As Shreiner (2002) observes, it is because it depends on the subjective gain that a client gets from a financial contract which hinges on the tastes, constraints, and opportunities of clients.

4 See BOG (2010) Monetary Policy Committee Press Release, April

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