Microfinance in the Caribbean: How to Go Further

Glenn D. Westley

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Micro, Small and Medium Enterprise Division
Sustainable Development Department
Inter-American Development Bank
1300 New York Avenue, N.W.
Washington, D. C. 20577

Email: mipyme@iadb.org
Fax: (202) 312 4134
Web Site: www.iadb.org/sds/msm

Foreword

For far too long in the IDB, the English-speaking Caribbean has been the stepchild of microfinance, with the Bank working much more intensively to build up microfinance institutions (MFIs) in Latin America. To be sure, the IDB has done some operations with microfinance providers in the Caribbean, such as DFL, DFLSA, IPED, and the credit union systems of Jamaica, Trinidad & Tobago, and the Bahamas. However, we would like to do much more.

What is the reason for this lack of activity in the Caribbean? Many have blamed a difficult environment in which to do microfinance. Certainly, there are difficulties. The markets are undoubtedly much smaller than those of Latin America. Subsidies have distorted incentives and undercut repayment discipline. But as this paper points out, many Caribbean countries are favored with important natural advantages as well. For example, their small size reduces MFI operating and client transaction costs, and the Caribbean road and telecommunications infrastructure is often better than that found in many Latin American countries where microfinance has flourished.

As the paper then argues in detail, just as many MFIs in Latin America have overcome extremely harsh operating environments—including the presence of government subsidies as well as a number of other difficulties—so too can the Caribbean MFIs overcome the external obstacles they face. The paper concludes that Caribbean MFIs can become profitable, successful financial institutions by making changes to their internal policies and procedures, especially their lending methodology. This is a very empowering conclusion, for it says that Caribbean MFIs need not wait for someone else to remedy external difficulties. They can be successful by changing their own practices.

The second half of the paper goes on to analyze the kinds of changes that are needed for Caribbean MFIs to become successful. We hope that the analysis presented in this paper will open a path toward sustainability and success for those MFIs that wish to follow it and that the IDB can join in partnership with such MFIs to build a stronger microfinance industry throughout the Caribbean region.

Álvaro R. Ramírez
Chief
Micro, Small and Medium Enterprise Division

Contents

The Challenge of Microfinance in the Caribbean

Studies by von Stauffenberg (2000), Wenner and Chalmers (2001), and USAID (2004) all conclude that most microfinance institutions (MFIs) in the English-speaking Caribbean have not enjoyed great success. These MFIs generally operate on a very small scale, experience great difficulties with loan recovery, and lack sustainability.[1] Of the 15 MFIs on which von Stauffenberg collected data, the median number of clients was 775 and the median 30-day portfolio at risk was 39 percent, a delinquency rate so high as to virtually preclude sustainable microfinance.[2] While the median return on equity (ROE) was marginally positive at 3.1 percent, von Stauffenberg makes it clear that this figure would turn highly negative if subsidized funding were repriced at market rates, adequate provisions were made for loan losses, and operating cost subsidies were eliminated. Judging by the more recent (though less comprehensive) microfinance data given in USAID (2004), our own data collection (some of which is presented in this paper), and numerous recent conversations with donor and MFI staff about Caribbean MFIs, these characteristics of low outreach and sustainability levels and high loan delinquency are still quite prevalent among MFIs in the region.

What is the reason for this generally weak performance? A common answer from many donor and MFI staff involved in Caribbean microfinance is that there are many conditions external to Caribbean MFIs that make it much more difficult to be successful in the Caribbean than in Latin America. Wenner and Chalmers (2001) develop the same theme, discussing a number of external factors that inhibit Caribbean microfinance. They also cite one factor that is internal to the MFIs, namely, that loan underwriting in Caribbean MFIs tends to place too much emphasis on collateral and not enough on the other elements of successful microlending, such as assessments of character (willingness to pay) and household cash flow (ability to pay).

This paper argues that the reason that Caribbean microfinance has lagged is fundamentally explained by factors internal to the MFIs, rather than external to them. This is a very empowering conclusion for Caribbean MFIs. It says that Caribbean microlenders can be successful by changing their own practices. They do not need to wait for someone else to fix conditions over which they have little or no control.

The remainder of the paper is structured as follows. The next section examines the external factors inhibiting and favoring microfinance in the Caribbean vis-à-vis Latin America. It shows that some of the drawbacks of microfinance in the Caribbean may not be as serious as is sometimes argued, and that Caribbean microfinance is also favored in some important ways vis-à-vis microfinance in Latin America. Next, a series of four challenges that successful MFIs must meet are discussed, the first of which is achieving low loan delinquency rates and the second of which is becoming profitable. The following section presents empirical evidence that well-managed MFIs have maintained low loan delinquency rates and good profitability levels even in the face of very dire circumstances, or in short, that management can overcome even extremely difficult environments. The paper then introduces four Caribbean MFIs, two with track records of low loan delinquency rates and two with track records of high loan delinquency rates. It thoroughly analyzes the lending methodology used by each, as well as other factors thought to be pertinent to explaining the difference in loan delinquency performance. The factors that appear to be crucial in explaining success versus failure in controlling loan delinquency are highlighted. The paper then turns to a discussion of how these four MFIs might achieve sustainability and a track record of profitability. A final

[1] Throughout this study we refer to the English-speaking Caribbean simply as the Caribbean. This study specifically considers seven Caribbean countries that are members of the Inter-American Development Bank (IDB): Jamaica, Trinidad & Tobago, Barbados, Bahamas, Guyana, Suriname, and Belize. We follow the common practice of counting the last three as Caribbean countries even though they are on the mainland of South and Central America.

[2] Portfolio at risk is a measure of loan delinquency and is equal to the following ratio:
Outstanding principal balance of loans overdue more than 30 days / Gross loan portfolio.

section highlights the principal conclusions of the study and makes recommendations for how governments and donors can best implement these findings.

External vs. Internal Factors

The left-hand column of Table 1 attempts to organize and present many of the common arguments one encounters about why microfinance is more difficult in the Caribbean than in Latin America.[3] Many of these arguments are reasons that the market for microloans is much smaller in the Caribbean countries (see the first two bullets of the left-hand column of Table 1). Population sizes are obviously much smaller in the Caribbean than in the Latin American countries. The Caribbean countries generally have higher education and income levels and may also have lower unemployment and underemployment rates and better social safety nets. These factors can all inhibit microenterprise formation and lead to a smaller ratio of microenterprises to population, further reinforcing the tendency for Caribbean countries to have a small number of microenterprises. Finally, a smaller percentage of Caribbean microenterprises may demand loans from MFIs because in the Caribbean there are: lower poverty rates (with the higher-income Caribbean microentrepreneurs possibly having more savings or access to credit cards, banks, or other funding sources), a long history of macroeconomic stability (leaving borrowers unaccustomed to the high nominal loan rates of interest charged by MFIs, which may reduce demand due to lack of acclimation to and perhaps resentment of such high rates), and possibly a greater alternative supply of funding available to all microentrepreneurs from government and donor programs, credit unions, and other financial institutions.

Microenterprise Formation and Market Size

Wenner and Chalmers (2001) provide data to back up many of the differences between the Caribbean and Latin America that are asserted in points i-vii of Table 1. (For some of these differences, data would be very difficult or perhaps even impossible to find.) Table 2 shows that the seven Caribbean countries do tend to be higher-income countries compared to the 19 other borrowing members of the IDB, although Guyana and to some extent Suriname, are exceptions. While Table 3 shows that the Caribbean countries certainly have smaller populations, their ratios of microenterprises of population are not necessarily lower than those found in Latin America. The average of this ratio for the three Caribbean countries on which we have data is 12.0 percent, nearly equal to the 12.4 percent average for the 18 Latin American countries.[4] This calls into question the importance of points ii-iv in the first bullet since these factors are supposed to inhibit microenterprise formation and reduce the microenterprises/population ratio.

[3] The latter is used as a comparator region because of its geographical proximity to the Caribbean and because numerous MFIs in many Latin American countries have achieved substantial success.

[4] The data for the number of microenterprises are obtained by analyzing the household surveys for each of the 21 countries. Of the seven Caribbean IDB member countries, household surveys were available for three: Jamaica, Guyana, and Belize.

Table 1 External Factors Inhibiting and Favoring Microfinance in the Caribbean (vis-à-vis Latin America)

Conditions Inhibiting Caribbean Microfinance (vis-à-vis Latin America)	Conditions Favoring Caribbean Microfinance (vis-à-vis Latin America)	Neutral Conditions (favoring neither region)
• Fewer microenterprises: i. smaller population sizes ii. possibly lower unemployment and underemployment rates iii. higher education and income levels iv. better social safety nets	• Small geographic areas and generally high population densities allow MFIs to reach most microenterprises with a smaller number of branches, reducing operating costs • Relatively good roads and telecommunications infrastructure facilitate access to clients, further reducing MFI operating costs and client transactions costs	• Macroeconomic stability present in both regions facilitates the provision of financial services, including microfinance (by reducing MFI liquidity, term transformation, and currency mismatch risks; credit risks from economic downturns and changing relative prices of borrowers' inputs vs. outputs; etc.)
• Smaller percentage of existing microenterprises may demand MFI credit because in the Caribbean there are: v. lower poverty rates (thus, a greater percentage of Caribbean microenterpreneurs are higher income and so may have more savings or access to other funding sources) vi. greater macroeconomic stability in the past, which leaves borrowers unaccustomed to high nominal rates of interest charged by MFIs on their loans; this may reduce demand due to lack of acclimation and possibly resentment vii. possibly greater alternative supply from government and donor programs, credit unions, and other financial institutions	• Informal collateral seizure (entering client homes and taking the collateral—in accordance with the loan contract, but despite the fact that clients do not have to let MFI personnel into their homes) works in a high percentage of cases: 95-98 percent in some Caribbean countries versus 60 percent or less in some Latin American countries • The secured transaction framework, which is based on English common law in the Anglophone Caribbean, favors the creditor in a number of ways. While the seizure and sale of collateral through a judicial proceeding is generally more expeditious in the Caribbean than in Latin America (where the secured transactions framework is based on Napoleonic law), it is still much less expeditious than in the U.S. and Canada.	
• Government and donor programs that tolerate lax loan repayment may harm the repayment discipline in the market • Government and donor programs that provide subsidized loans to MFIs may give them a comfort level that undermines control over operating expenses and portfolio quality	• Lower prevalence of enforced upper limits on loan interest rates in the Caribbean (usury ceilings)	

Table 2 GDP per Capita in 26 Countries

	Country	GDP per capita (US$)
1	***Bahamas***	***16,548***
2	***Barbados (2002)***	***9,624***
3	***Trinidad & Tobago***	***8,308***
4	Mexico	6,051
5	Chile	4,557
6	Costa Rica	4,193
7	Panama (2000)	3,939
8	***Belize***	***3,793***
9	Venezuela	3,782
10	Argentina	3,375
11	Uruguay	3,270
12	***Jamaica***	***3,074***
13	Brazil	2,834
14	El Salvador	2,292
15	***Suriname***	***2,245***
16	Peru	2,230
17	Ecuador	2,084
18	Guatemala	2,003
19	Dominican Republic	1,893
20	Colombia (2002)	1,866
21	Paraguay	1,027
22	Honduras	1,001
23	***Guyana (1999)***	***991***
24	Bolivia	893
25	Nicaragua	756
26	Haiti	335

Sources: Economist Intelligence Unit for Bahamas and Trinidad & Tobago, and *International Financial Statistics* for all other countries. Conversion of GDP from local currency to dollars is done with the market exchange rate. Data refer to 2003 unless otherwise noted.

While MFIs in the Caribbean certainly must contend with much smaller markets than their counterparts in Latin America, the data in Table 3 make it clear that the situation is far from hopeless. With 409,000 microenterprises in Jamaica and 58,000 in Guyana, these markets are of substantial size Microlenders and others in both countries report that there is great unexploited potential, with room for the largest MFI in each market to easily double its clientele or more.[5] Even the 24,000 microenterprises of Belize offer enough size for a reasonable microlending market to develop.

[5] Accion International (2002) notes that in the case of Guyana the unserved market is particularly large outside of the capital city of Georgetown.

Table 3 Number of Microenterprises and Relationship to Population

	Country	Number of Microenterprises	Population (millions)	Number of Microenterprises / Population (in %)
1	Peru	6,866,193	24.37	28.2
2	Paraguay	987,326	5.22	18.9
3	Dominican Republic	1,392,188	8.10	17.2
4	Bolivia	1,362,321	8.14	16.7
5	**JAMAICA**	**408,627**	**2.56**	**16.0**
6	Colombia	6,501,805	41.59	15.6
7	Honduras	891,180	6.39	13.9
8	Ecuador	1,694,663	12.17	13.9
9	Venezuela	3,247,271	23.71	13.7
10	Guatemala	1,421,714	10.80	13.2
11	Brazil	18,989,753	165.37	11.5
12	El Salvador	667,186	6.03	11.1
13	Mexico	10,273,945	96.65	10.6
14	Uruguay	341,909	3.29	10.4
15	Panama	289,004	2.81	10.3
16	**BELIZE**	**23,621**	**0.23**	**10.3**
17	Costa Rica	311,219	3.53	8.8
18	Nicaragua	417,570	4.80	8.7
19	Chile	1,207,184	14.82	8.1
20	**GUYANA**	**58,327**	**0.76**	**7.7**
21	Argentina	1,911,170	36.12	5.3
	TOTAL	**59,264,176**	**477**	**12.4**

Sources: Household surveys for 21 countries (for number of microenterprises) and *International Financial Statistics* (for population). Data for the 18 Latin American countries are from 1998-99 (except 1997 for Peru). For the three Caribbean countries, the data are from 1999 for Guyana and Belize and 2002 for Jamaica.

Alternative Credit Supply and Effects of Government

One might also question the importance of point vii (of the second bullet) and of the third and fourth bullets in the left-hand column of Table 1. Concerning point vii, while some Caribbean countries certainly have important government- or donor-supported programs that may unfairly compete with commercial MFIs, the state simply does not have sufficient resources to provide subsidized credit to anywhere near all of the micro and small enterprises in the country that potentially need a loan and would be creditworthy. Because of this, there are normally plenty of clients left over for commercial microlenders to serve, particularly if they can provide rapid loan approvals with a minimum of transactions costs imposed on the borrower (common failings of state-supported programs). Many, if not most, leading MFIs in Latin America grew up alongside and had to compete with state-subsidized lending programs from development banks and other sources. And while credit unions have a strong presence in the Caribbean, they mostly provide consumer and housing loans.

Turning to the third bullet, it is true that the lax collection policies associated with many of the state-sponsored lending programs can harm the culture of disciplined loan repayment among borrowers in general, including microenterprise

borrowers. However, if the commercial MFI is serving a clientele that is simply not attended to by the state-sponsored programs and whose primary alternative is to pay the far higher rates charged by moneylenders, then the MFI should be able to insist on strict repayment discipline and should also be able to charge loan rates that allow it to make a profit (at least if the MFI is not too inefficient). Again, many leading MFIs in Latin America have coped successfully with exactly this situation. Much the same argument can be made about the fourth bullet: many leading MFIs in Latin America have also coped successfully with the temptations of the "easy life" provided by cheap funding, and have maintained control over operating expenses and portfolio quality.

Favorable External Factors

Finally, to be fair in assessing the effect of external factors on MFIs in the Caribbean compared to those in Latin America, one should also consider the external factors that favor the Caribbean MFIs over their Latin American counterparts (second column of Table 1). These are hardly inconsequential. Partly because of their generally higher income levels, Caribbean countries typically have better roads and telecommunications infrastructure. This tends to reduce MFI operating costs and lower transactions costs for clients in accessing MFI offices. These benefits are further enhanced by the more compact size of the Caribbean countries. In addition, both informal and formal collateral seizure generally work better in the Caribbean (see Table 1), and the absence of usury ceilings eliminates a problem that is increasingly prevalent in Latin America.

Small Caribbean Markets and the Four Challenges of Microfinance

The smaller size of the potential microfinance market in the Caribbean countries certainly limits the size to which MFIs in these countries can grow. This is beyond question. What is open for discussion is whether the Caribbean MFIs can achieve the same levels of loan delinquency and profitability that so many MFIs in Latin America and elsewhere have achieved. In discussing this issue, it is helpful to recall Christen's (1997) series of four challenges that MFIs face as they develop and mature:

1) Achieving low loan delinquency rates
2) Becoming profitable
3) Accessing commercial funding sources (e.g., mobilizing deposits, obtaining commercial bank loans, and issuing bonds)
4) Attracting private, for-profit equity investment

The first problem facing any MFI is how to do well at its core business, that is, how to make loans and then recover on time a high percentage of what it has lent. This is critical. Loan delinquency has been termed the number one killer of MFIs, reflecting the fact that it is often a leading cause of MFI decapitalization and insolvency. MFIs that are not able to maintain reasonably low delinquency rates (certainly in the single digits and preferably under five percent) feel an immediate impact on their incomes as loans go uncollected. Next, they may see operating costs ballooning since, when loans go bad, loan collection easily becomes the most expensive component of the loan granting/administration/ collection cycle and thus adds significantly to total costs if done on any substantial share of the portfolio. Sometimes even more debilitating in the longer run is the nature of the client relationship that can develop. When delinquency is high, MFI staff can spend a great deal of their time in very negative interactions with clients, instead of in roles that foster the idea that the MFI is an institution that supports and helps its clients. This can undermine a base of customer loyalty. Moreover, at higher delinquency rates, a contagion effect may develop in which a large percentage of borrowers stop repaying loans on time (or at all) because they observe other clients doing the same and getting away with it. Finally, in addition to contributing to poor financial health in all of these ways, weak loan recovery undermines the growth and expansion of the MFI because it leads to a reduction in the availability of funds with which to extend new loans.

Meeting the first challenge—by reducing loan delinquency to low levels—increases MFI in-

come, decreases the costs of loan provisioning and write-offs, and helps the MFI to become sustainable and profitable in all of the other ways just discussed. Building on this base, MFIs wishing to meet the second challenge (becoming profitable) generally must streamline loan underwriting and collection procedures, reduce other operating costs, and possibly increase loan rates. Once an MFI has achieved a track record of profitability, it can attack the third and fourth challenges: obtaining commercial liabilities and equity. Only the most mature MFIs are grappling with these last two challenges; the Caribbean MFIs are still basically occupied with challenges one and two.

Good MFI Management Can Overcome Harsh Environments

Is it reasonable to expect Caribbean MFIs to be able to overcome challenges one and two, achieving low loan delinquency rates and becoming profitable, despite the handicaps given in the left-hand column of Table 1? These are important handicaps. Caribbean MFIs face a much smaller potential market (because of all the factors cited in the first two bullets of the left-hand column of Table 1), and in many cases must deal with the distorting effects of government and donor microlending programs (last two bullets of this column). Let us first consider the issue of market size. As can be seen in Table 4, a number of small MFIs in Latin America have achieved delinquency rates of under 10 percent and positive profits (ROA), despite having only 1000-3500 clients. Delinquency control is not particularly size dependent; rather, it is mostly a function of the MFI having the knowledge and discipline to employ an appropriate credit methodology on a consistent basis. Therefore, it is not surprising to see small MFIs with low delinquency rates. On the other hand, there are economies of scale in the provision of financial services, and so it is interesting to see examples of small MFIs that have controlled costs well enough and/or raised loan rates high enough to also achieve sustainability.

But, can low delinquency rates and profitability be achieved by small Caribbean MFIs in the presence of government and donor microlending programs that: a) tolerate lax loan repayment (which may harm the repayment discipline in the market) and b) provide subsidized loans to MFIs (which may give the MFIs a comfort level that undermines control over operating expenses and portfolio quality)? These are the third and fourth bullets of the left-hand column of Table 1, and it was argued earlier that many, if not most, leading MFIs in Latin America grew up and

Table 4 Small MFIs in Latin America with Good Performance

MFI	Country	Number of Active Borrowers	Average Loan Size (US$)	Portfolio at Risk (30 days)	Profitability: Return on Assets (ROA)
FONDESURCO	Peru	974	1021	10.7%	1.2%
ADIM	Nicaragua	1395	292	4.5%	9.4%
EDPYME Crear Arequipa	Peru	2151	916	8.0%	5.8%
EDPYME Crear Trujillo	Peru	2354	719	7.6%	1.3%
AgroCapital	Bolivia	3270	3675	1.4%	2.3%
ACTUAR Tolima	Colombia	3467	386	7.2%	2.4%
CEAPE - PE	Brazil	3636	236	6.5%	2.7%

Notes: The 30-day portfolio at risk measures the outstanding principal balance of all loans with arrears over 30 days divided by the total gross loan portfolio. ROA is measured as the ratio of profits (after taxes and excluding any grants and donations) to average total assets.
Source: The MIX Market (www.MixMarket.org). We used the most recent year of data available from this website at the time of our analysis (April 2005).

coped successfully with exactly these problems, demonstrating that this is indeed possible. Moreover, as discussed earlier, the Caribbean MFIs have a number of important advantages over their Latin American counterparts (middle column of Table 1), which help them in overcoming Christen's first two challenges.

As a final argument in favor of the proposition that MFIs can be successful under difficult conditions, we present evidence that well-managed MFIs have achieved low loan delinquency rates and good profitability levels even in the face of very dire external circumstances. Or, to put it more succinctly, management can overcome even extremely difficult environments. This is our final argument for the proposition put forward at the beginning of the paper: that Caribbean microfinance has fundamentally lagged because of factors internal to the Caribbean MFIs, rather than external to them, and so these MFIs can be successful by changing their own practices.

Data on loan delinquency (30-day portfolio at risk) and profitability (ROA) for 11 MFIs in Colombia, Bolivia, and Peru over the period 1998-2000 illustrate what well-managed MFIs can do in difficult environments (Table 5). To appreciate the meaning of these data, one must recall that Latin America suffered a deep recession in 1998-99 after the solid growth years of 1996-97. The Asian financial crisis of 1997, the Russian payments moratorium of August 1998, and the major Brazilian devaluation of January 1999 sparked a severe economic recession in 1998 and 1999 that was widespread across the countries of Latin America. The economies of Colombia, Bolivia, and Peru were among those hit hardest by these events. As a result, the banking systems of all three countries also suffered crises during 1998-99.

In Colombia, these shocks came atop a grinding civil war. Colombia suffered its deepest recession in 60 years in 1999, with GDP declining 3.8 percent and the unemployment rate jumping to an unprecedented level of 20 percent. Despite these extremely difficult circumstances, the five affiliates of the Women's World Bank (WWB) maintained outstanding records of delinquency control (with the 30-day portfolio at risk always under four percent) and profitability (with ROA generally well above the 1-2 percent range that is considered to be good performance in a banking institution). Beyond even these impressive

Table 5 Performance of Well-Managed MFIs in Difficult Environments (%)

Country	MFI	Portfolio at Risk (30 days)			Profitability: Return on Assets (ROA)		
		1998	1999	2000	1998	1999	2000
Colombia	WWB Cali	0.4	1.2	0.8	6.2	9.2	9.8
	WWB Popayán	2.2	1.7	1.2	11.6	18.8	20.8
	WWB Bucaramanga	2.5	2.4	1.1	-0.7	4.7	10.4
	WWB Medellín	3.3	2.6	1.5	6.0	3.4	6.1
	WWB Bogotá	2.5	1.3	1.5	2.8	3.9	10.3
Bolivia	BancoSol	1.8	9.2	8.1	3.8	0.3	0.4
	Caja los Andes	0.9	5.1	5.6	3.3	1.5	1.2
	FIE	0.5	4.2	9.0	1.4	0.6	1.2
Peru	Mibanco	2.5	1.9	1.0		0.9	3.4
	CMAC Arequipa	1.6	4.8	5.4	2.5	1.8	2.6
	CMAC Cusco	6.3	8.3	2.5	4.3	4.6	4.5

Notes: Blank cells indicate missing data. The 30-day portfolio at risk measures the outstanding principal balance of all loans with arrears over 30 days divided by the total gross loan portfolio. It is measured at the end of the year. ROA is measured as the ratio of profits (after taxes and excluding any grants and donations) to average total assets.
Sources: All data except those pertaining to Mibanco are from MicroRate (www.MicroRate.com). Mibanco data are from the MIX Market (www.MixMarket.org).

accomplishments, the delinquency and profitability performance of some of the WWB affiliates, such as WWB Cali, actually improved from the strong growth years of 1996-97 to the subsequent recession years of 1998-99. This is largely attributable to the fact that these MFIs got even better at what they were doing, so much so that they more than made up for the far harsher macroeconomic environment in which they had to operate. In particular, these MFIs made notable strides in improving their loan underwriting and collection practices, and in increasing loan officer productivity. For example, the Cali affiliate steadily increased the number of borrowers per loan officer, from 387 in 1996 to 612 in 1999.

The impressive performances of the Bolivian MFIs shown in Table 5 came not only while confronting a difficult macroeconomic and financial sector environment, but also some of the most intense competition faced by MFIs anywhere in the world and a borrower revolt that exploded in 1999 and continued into 2000 and beyond. These events forced Bolivian MFIs to deepen their analysis of even repeat loan requests, in order to root out borrowers who were overindebting themselves by taking loans from several financial institutions at once or whose repayment discipline was weakened by the entrance of consumer lenders, which offered credit under recklessly loose underwriting standards.

Finally, the Peruvian MFIs faced not only the aforementioned economic and financial sector difficulties, but also the ravages of the El Niño phenomenon, which peaked in December 1997-May 1998 and hit Peru and Ecuador the hardest of any countries in Latin America.

Even wider support for the idea that MFIs can overcome difficult operating environments comes from the MIX Market database of approximately 100 Latin American MFIs (www.MixMarket.org). These MFIs are a broad selection of some of the better-managed MFIs in Latin America. Table 6 shows that the average portfolio at risk (30 days) and ROA of these MFIs held up very well during the 1998-99 and 2001-02 economic crises, both of which hit most Latin American countries very hard.

Table 6 Delinquency and Profitability Peformance of Latin American MFIs (%)

	Portfolio at Risk (30 days)	Return on Assets (ROA)
1998	4.5	2.8
1999	5.8	2.2
2000	4.9	3.0
2001	6.4	3.6
2002	6.2	4.3
2003	3.1	5.1

Notes: The 30-day portfolio at risk measures the outstanding principal balance of all loans with arrears over 30 days divided by the total gross loan portfolio. ROA is measured as the ratio of profits (after taxes and excluding any grants and donations) to average total assets. The table reports weighted averages of individual MFI portfolio-at-risk and ROA measures, with weights proportional to each MFI's total gross loan portfolio and total assets, respectively.
Source: The MIX Market (www.MixMarket.org).

The Control of Loan Delinquency: Study Methodology

To summarize the argument so far, this paper contends that Caribbean MFIs, on the whole, have simply not strengthened themselves sufficiently to cope with the challenges presented by their microlending environments. The next part of the paper is devoted to an analysis of the kinds of changes Caribbean MFIs might need to make in order to overcome the first challenge of microfinance: achieving low loan delinquency rates. We have already discussed the many reasons why controlling loan delinquency is a key task facing any MFI. By controlling loan delinquency, Caribbean MFIs demonstrate mastery of their core business and put themselves well down the road towards sustainability and profitability. Without such control, their stability will be continually in question and sustainability will be difficult to achieve.

And so, we ask the following questions. How do Caribbean MFIs with a track record of low loan delinquency rates achieve such results? What do they do that is different from what is done by the Caribbean MFIs with high delinquency rates? In order to answer these questions, we selected four Caribbean MFIs—two with a track record of low delinquency rates and two with a track record of high delinquency rates—and thoroughly analyzed the lending methodology used by each, as well as other factors thought to be pertinent to explaining the difference in loan delinquency performance.

Four Caribbean MFIs

In order to set the stage for the analysis of why some MFIs have been able to achieve low delinquency rates and others have not, and also to lay the groundwork for a subsequent discussion on achieving profitability, we briefly introduce the four MFIs that are analyzed here. We first discuss why these four MFIs were selected. Table 7 then presents the most recent data available for the four MFIs (for their fiscal years 2004), with preceding years of data given in Annex A. While discussion of the data pertaining to the four MFIs and to the *Microbanking Bulletin's* Latin American peer group (last column of Table 7) is largely postponed until the later section on achieving profitability, a few of the data series are examined now, in order to set the stage for the delinquency discussion.[6]

The four MFIs were selected for a number of reasons. First and foremost, they fulfill the central criterion that two have a track record of low loan delinquency rates—Jamaica National Small Business Loans (JNSBL) and Micro Enterprise Financing Limited (MEFL), both of Jamaica—and two have a track record of high loan delinquency rates—Institute of Private Enterprise Development (IPED) of Guyana and Portmore Community Development Fund (Portmore CDF) of Jamaica. Second, all four MFIs are essentially specialized in lending; if any training or other nonfinancial services are offered, these services account for only a tiny share of overall operating costs. Third, most or all of the loans granted by these MFIs go to microenterprises rather than to small or medium-scale enterprises. Finally, we emphasized, but did not exclusively focus on, private sector MFIs over those that are tools of the government for disbursing credit. MEFL and IPED are NGOs whose funding is obtained from donors and commercial banks. JNSBL is a microlending subsidiary of the Jamaica National Building Society (JNBS) and receives its funding from the parent company. (JNBS is a regulated savings and loan institution, which intermediates savings into home loans.) Portmore CDF is a member-owned credit cooperative and obtains its funding entirely from a Jamaican government agency (the Micro Investment Development Agency, or MIDA). The emphasis on private sector MFIs reflects our own belief that this is the best way forward for microfinance in the Caribbean, as it has been in most of the world. However, Portmore CDF is included as a representative of the government-based model, a model that is quite common in the Caribbean. Portmore is easily the largest of the 13 CDFs

[6] All issues of the *Microbanking Bulletin* including issue no. 9, which we have used here, can be found at the website www.MixMarket.org.

Table 7 Characteristics of the Four Case Study MFIs and a Latin American Benchmark

	JNSBL	MEFL	IPED	Portmore CDF	MBB – Latin Am.
Reporting dates -->	**Jan 2005**	**Sept 2004**	**Dec 2004**	**Dec 2004**	**2001-02**
Country	Jamaica	Jamaica	Guyana	Jamaica	Latin Amer.
Start of lending operations	Oct 2000	Nov 2002	1986	1999	
Type of lending: Individual (I) or Solidarity Group (G)	I	mostly G	I	I	
Number of offices (main and branch)	28	1	12	3	12
Gross loan portfolio (US$ thousands)	$2,683	$142	$5,574	$1,081	$8559
Number of borrowers	8,972	939	5,124	490	13,755
Growth rate of US$ gross loan portfolio (1 year)	49.3%	200.5%	-3.5%	42.9%	
Growth rate of number of borrowers (1 year)	37.6%	184.5%	-7.0%	11.9%	
Average outstanding loan balance per borrower (US$)	$299	$151	$1,088	$2,206	$816
Average loan term (months)	5.5	approx. 4	7	12.8	
Portfolio at risk > 30 days (% gross portfolio)	3.3%	5.5%	38.0%	15.6%	4.9%
Loss provision coverage > 30 days [1]	178%	99%	66%	82%	120%
Operating costs / Average gross loan portfolio	87%	341%	14%	24%	27%
Operating costs / Average number of borrowers (US$)	$251	$511	$151	$471	$195
Borrowers / Loan officers	236	117	223	140	353
Borrowers / Total staff	114	55	73	41	128
Average remuneration of all staff (US$ per annum)	$15,514	$17,762	$5,681	$9,196	
Cost of funding liabilities [2]	6.2%	4.5%	2.9%	9.4%	
Portfolio yield [3]	93%	90%	22%	35%	44%
Debt/Equity	4.0	2.5	1.1	209	2.7
ROA = return on average assets (before taxes) [4]	1.1%	-16.0%	3.2%	7.9%	
AROA = adjusted ROA [5]	-5.8%	-22.8%	-5.8%	5.6%	-0.1%
FSS = % of total adjusted costs covered by revenues [6]	91%	32%	69%	122%	102%

Notes: The four MFIs have different fiscal years. The four columns of MFI data pertain to the one-year period ending at the date shown in each column heading (or for point-in-time data such as portfolio at risk, to the date itself). The only exception is JNSBL, where the data cover the 10 months ending in January 2005, but are expressed as annual rates as needed in order to be comparable to the data given for the other MFIs. The final column is taken from the *Microbanking Bulletin* issue no. 9, and provides data for the Latin America peer group. Blank cells indicate missing data.

[1] This is the ratio: Loan loss reserve / Outstanding balance of loans overdue > 30 days.

[2] This is the ratio: Interest and fee expenses on funding liabilities / Average funding liabilities.

[3] This is the ratio: Total interest, commissions, and other revenue from loan portfolio / Average gross loan portfolio.

[4] This is the ratio: Net operating income before income taxes / Average total assets. The numerator excludes grants and donations. Only JNSBL has paid income taxes. These taxes are excluded from ROA in order to better compare JNSBL with the other three MFIs.

[5] AROA is the same as ROA but with the following adjustments made to net operating income: a) if the average cost of the MFI's funding liabilities is less than the interest paid by the banking system on certificates of deposit (using the CD rates given in *International Financial Statistics*, line 60L), then funding costs are increased to the CD rate; b) provisioning expenses are set equal to 100 percent of the outstanding balance of loans overdue > 30 days; c) if the net worth of the MFI is > 0, then an inflation expense equal to net worth times the inflation rate is subtracted from net income; and d) the value of in-kind subsidies is subtracted from net income (a consideration only for JNSBL).

[6] FSS is the Financial Self Sufficiency ratio: Operating revenues / (Adjusted funding liability costs + Adjusted provisioning costs + Adjusted operating costs). This ratio employs the same adjustments specified in footnote 5, above.

Sources: The final column is from The MIX (2003) and uses somewhat different adjustments for AROA and FSS than those employed in the rest of Table 7. Inflation rates, bank deposit rates, and exchange rates used in the four MFI calculations are obtained from the International Monetary Fund's *International Financial Statistics*. All other data are from the MFIs.

funded by MIDA, and, according to some observers, the best.[7]

Some readers may wonder why three of the four case study MFIs are from Jamaica. The reason is simple. Among the financial institutions that are located in one of the seven Caribbean IDB-member countries and that are specialized in lending to microenterprises, JNSBL and MEFL clearly have the best track record of low loan delinquency rates and also possess an excellent grasp of how to do microlending. In order to obtain positive lessons on how to lend to microenterprises in the Caribbean, these seemed clearly to be the two best MFIs to study. Having established that, it was then decided that one of the two MFIs with a track record of high delinquency rates should also be from Jamaica, so that the differences in loan methodology between the high and low delinquency rate MFIs could not simply be ascribed to differences in country circumstances. For that reason, Portmore CDF was selected. Finally, the fact that we have household surveys—which provide fundamental information on the size of the microfinance market—available only for Jamaica, Guyana, and Belize tilted the choice of the fourth MFI in favor of an MFI from one of these countries, specifically from one of the last two countries, in order to provide at least some cross-country variation in the location of the MFIs.[8] IPED was chosen because it is easily the largest of the MFIs in Guyana and Belize, and therefore of importance in its own right.

An important disclaimer arises from the fact that we have analyzed the lending methodologies (and other loan delinquency controls) used by four case study MFIs—not by 10 or 15 or even more MFIs. Accordingly, the specific weaknesses found in the lending methodologies used by the case study MFIs may or may not hold in most other MFIs in the Caribbean. This is all right; our aim is not to provide a detailed prescription for how all Caribbean MFIs should achieve low delinquency rates (if such a detailed prescription were even possible). Rather, the two key aims of the case study analysis are: a) to buttress by example the argument made above that where an MFI's delinquency rate remains high over a period of years, this is almost certainly due to internal causes such as a defective lending methodology; and b) to suggest, but not exhaustively catalogue, the kinds of things that might be wrong (and right) in how Caribbean MFIs do microlending.

The purpose of our comparative analysis of the four case study MFIs is not to single out specific MFIs for criticism or praise. Rather, as just noted, it is to support a more general analysis and provide examples of things that are being done right and wrong in Caribbean microlending. Since there are numerous MFIs in the Caribbean with track records of high delinquency rates, Portmore CDF and IPED are but two of many examples that could have been picked.

Turning to the data in Table 7, the most important fact for present purposes is that the delinquency rates of JNSBL and MEFL are substantially lower than those of IPED and Portmore CDF: 3.3 and 5.5 percent versus 38 and 15.6 percent, respectively. These delinquency rate differences are observed consistently over time (Annex A). For purposes of the loan delinquency discussion, it is also helpful to know that all four MFIs employ only individual lending except for MEFL, which is primarily a group lender. MEFL is also the newest program, only 2½ years old at the time of our analysis. Despite its newness, MEFL has a disciplined approach to lending. Although it has only one office from which to make loans, a partnership with Scotiabank enables MEFL's clients to repay at any of Scotiabank's 32 offices in Jamaica. JNSBL is the largest of the four MFIs in terms of number of borrowers (8972), although given its small average loan size of US$ 299, its total portfolio is only US$ 2.7 million. At US$ 5.6 million, IPED has the largest loan portfolio, based on a sizable number of loans (5124) of considerably larger average size (US$ 1088). Portmore CDF has the largest average loan size (US$ 2206), which allows it to achieve a portfolio of over US$ 1 million despite having only 490 borrowers. At US$ 151, MEFL has the smallest average

[7] The lack of readily available financial data makes this last claim difficult to verify.

[8] Annex B presents the data obtained from the three household surveys.

loan size, the product of the poor neighborhoods it is targeting and the newness of the program (so that many of MEFL's borrowers have not had time to work up to larger loan sizes).

What Explains Success vs. Failure in Controlling Loan Delinquency?

What factors explain why JNSBL and MEFL have loan delinquency rates consistently around 2-5 percent while Portmore CDF and IPED have far higher rates, of approximately 15-25 and 40-50 percent, respectively? We have already argued that factors internal to the MFI, rather than external to it, are likely to provide the main explanation. For these four MFIs, there are three particularly crucial differences that appear to explain much of the observed disparity in delinquency rates. All three of these differences are critical aspects of the credit methodology used by the MFIs:

- How the MFIs assess the character (willingness to pay) of loan applicants
- How effectively the MFIs follow up on loan delinquency after it has occurred
- Whether the MFIs have implemented an appropriate loan officer incentive pay system

Tables 8 and 9 present key characteristics of the credit methodologies used by the four MFIs in the areas of loan underwriting and loan collection, respectively. Table 10 presents other credit methodology characteristics as well as loan product design issues. The three most crucial differences, highlighted in the bullet points above, emerge from the analysis of the factors considered in these tables. As just discussed, we cannot say whether these three deficiencies, which were identified for Portmore CDF and IPED, would necessarily explain high delinquency rates in other Caribbean MFIs, though they may be suggestive of the kinds of things that could go wrong and more generally buttress the argument that adopting an adequate credit methodology is central to controlling loan delinquency. We now discuss the comparisons presented in each of Tables 8, 9, and 10 in turn.

Loan Underwriting

Why would clients choose to repay their loans with an MFI, month after month, during which many adverse events might occur? And why would a very high percentage of clients (95 percent or more) do this, allowing the MFI to effectively control loan delinquency and paving the way to sustainability and profitability? The answer given by leading MFIs is that four factors are key. First, MFIs should select clients who *can repay*, as shown by an analysis of the client's combined business and household cash flow and the stability of the client's business and other sources of income. Second, MFIs should conduct a character analysis of prospective clients in order to determine whether they are the kinds of responsible people who are *willing to repay* the loan. Third and fourth, MFIs should provide sticks and carrots to encourage clients to repay. Thus, clients will *want to repay* the loan in order to avoid losing their collateral or being pressured by any loan guarantors (sticks). And, clients will also *want to repay* the loan in order to maintain access to high-quality loan and other financial services, for example, loans with few client transactions costs and a rapid response to credit requests (carrots). Of these four factors, the ability of the two MFIs with high delinquency rates to recover a high percentage of their loans on time appears to be most severely compromised by inadequacies in their character analyses, the second factor, though other weaknesses in loan underwriting play a role as well. We now discuss the four factors in turn.

Ability to Pay (Cash Flow Analysis)

Best practice MFIs undertake a thorough analysis of household cash flows in order to determine monthly household savings.[9] Household savings are calculated by summing the income from the loan applicant's business (net of all of the business's expenses) together with the household's income from all other verifiable

[9] To simplify the exposition, we assume the repayment frequency is monthly, and so savings are calculated on a monthly basis. If the repayment frequency is weekly or biweekly, then the calculation of savings is also weekly or biweekly, respectively.

Table 8 Credit Methodology Issues: Loan Underwriting

	IPED	Portmore CDF	JNSBL	MEFL
Ability to pay (cash flow) calculation	a) Fails to integrate business with household: loan payments must be ≤ 40% of business profits (instead of ≤ 70% of household savings) b) Inadequate use of margins in profit calculation	a) Fails to adequately integrate business with household: loan payments must be ≤ 50% of business profits net of some household expenditures (instead of ≤ 70% of household savings) b) Complex cash flow projection is used that could hide a money-losing business c) Virtually insist on written sales records	a) Properly integrates business with household, but uses an extremely conservative underwriting criterion: loan payments must be ≤ 25% of household savings in the low period (household savings are calculated in high, medium, and low periods)	a) Fails to integrate business with household: loan payments must be ≤ 50% of business profits (instead of ≤ 70% of household savings)
Willingness to pay (character) analysis	Not efficient or sufficient	Not sufficient	A model of best practices (see text)	A model of best practices (see text)
Collateral	Value of household and other goods ≥ 100% of loan value in all cases, and usually more—often as much as 200%	All loans must be 100% collateralized, with 25% in cash up front and the rest in household and other goods	Loans must generally be 125% collateralized with household and other goods. This may be reduced to 90% or even less for clients who have repaid 4 or more loans well	Forced savings of 1% of the loan amount per week serves as cash collateral. Also, group loans have the group guarantee and all individual borrowers must have a co-signer for the full loan amount.
Transactions costs for MFI and borrower	a) Extensive pre-credit requirements list imposes substantial transactions costs on 1st time borrowers and on loan officers b) Loan officers spend significant time in the office with walk-ins (approximately 1000 walk-ins per month) c) Loan officers spend only 50% of their time in the field	a) Pre-credit requirements (including savings) impose more than usual transactions costs on 1st time borrowers b) Loan officers spend significant time in the office with walk-ins (approximately 450 walk-ins per month) c) Loan officers spend only 40-50% of their time in the field	a) Fairly minimal pre-credit requirements: applicants need only bring ID, tax registration number, 2 photos of themselves, 2 reference letters, and phone numbers of 2 other references b) Loan officers spend no time with walk-ins—receptionist gives them requirements list c) Loan officers spend 80-90% of their time in the field	a) Fairly minimal pre-credit requirements—similar to JNSBL (including reference letters) b) Loan officers spend no time with walk-ins—receptionist gives them requirements list c) Loan officers spend 90% of their time in the field
Delays for 1st loans: time from loan inquiry until borrower receives loan	Substantial delays. Extensive pre-credit requirements list imposes substantial delays on 1st time borrowers: typically takes 3-4 weeks to receive the loan.	Substantial delays. Pre-credit requirements (especially forced savings) impose substantial delays on 1st time borrowers: typically takes 4-5 weeks to receive the loan.	Reasonably expeditious: 1st time borrowers typically receive their loan in 1½ to 2 weeks	Somewhat expeditious: 1st time borrowers typically receive their loan in 2½ to 3 weeks

sources and subtracting total household consumption expenditures. The difference is the amount of money the household has available to meet loan repayments. Conservative assumptions are often employed in calculating household income; for example, remittance and other income flows may not be counted (or fully counted) unless the client can provide proof of the amounts received. Also, leading MFIs typically calculate savings in good, normal, and bad months, and size client loan repayments to the level of their household savings in the low (bad) months. In most leading MFIs, monthly loan payments must be less than 70 (or sometimes 80) percent of calculated monthly savings in the low months in order to allow for a margin of safety. Some MFIs also allow this percentage to vary from client to client depending on the volatility of each client's income flow, insisting on a larger margin of safety (i.e., a smaller percentage) when income flows are more volatile.

The cash flow analyses carried out by the four Caribbean MFIs all suffer from one or more important defects. The most common mistake is conducting the cash flow analysis only on the loan applicant's business, instead of on the entire household unit, thus failing to take account of the fact that money is usually fungible within this unit. For example, IPED requires that loan payments not exceed 40 percent of the profits of the business that has applied for the loan. This criterion fails to consider other sources of household income (which could help to support a larger loan payment) and it fails to subtract out household expenditures (which reduce the funds available for loan repayment). Thus, depending on which of these two omissions is larger, and by how much, IPED's formula could provide either too conservative or too liberal an underwriting standard compared to the more typical 70 percent of household savings. For example, if the household is large, has large food and other expenditures, and has no other sources of income, it may struggle to make loan payments that are permitted by IPED's formula, putting it in constant danger of default. On the other hand, if the household's other income is greater than its total consumption expenditures, the client should have little difficulty affording even the largest loan IPED will allow since the loan payments will be less than 40 percent of household savings. However, such a conservative loan underwriting standard may cause many borrowers to be frustrated with the small loans they are permitted, given their capacity to repay much larger loans out of all household income sources. This may lead many borrowers to value the credit service less and thus may lead to greater loan delinquency rates since clients who are not very satisfied with the credit product may not make as great an effort to repay their loans when they encounter financial difficulties in their business or personal lives. The lower levels of client satisfaction may also lead to lower client retention and accession rates (where the latter refers to the percentage of prospective clients who choose to apply for a loan), which reduce IPED's sustainability. By lending some of its clients less than these clients would like and could manage, IPED reduces its sustainability in another way since it is earning interest on a smaller loan portfolio.

The problem just described in IPED's cash flow analysis also applies to Portmore CDF and MEFL. Only JNSBL's analysis properly integrates the loan applicant's business within the framework of the entire household's cash flow. However, JNSBL then applies an extremely conservative underwriting standard, allowing loan payments to be at most 25 percent of household savings in the low savings period. Again, this may reduce client satisfaction, loan repayment rates, retention and accession rates, and sustainability. In fact, we argue later that this highly conservative underwriting standard may be a major factor that has held JNSBL's average loan size to such low levels and kept it from achieving full financial sustainability.[10]

The ability-to-pay calculations of IPED and Portmore CDF suffer from additional deficiencies, including IPED's inadequate use of margins in calculating microenterprise profits and Portmore CDF's complex cash flow calculation,

[10] JNSBL's low loan delinquency rates may be attributed to its otherwise excellent procedures for underwriting loans and its very aggressive loan collection program, all backed by a loan officer incentive pay system that heavily rewards low delinquency rates.

which may hide certain problems. To understand the first of these two issues, it must be recalled that a major problem in microlending is that most microenterpreneurs do not have written records of their business' sales and costs. Thus, loan officers must reconstruct business profits by probing the loan applicant's memory and using what receipts or other records may be found. This often involves a lengthy process in which the loan officer: a) asks the microentrepreneur about their sales on normal, good, and bad days in the most recent week and the weeks just prior to that; b) then aggregates up to sales in normal, good, and bad weeks and counts how many weeks there are of each; c) and then aggregates up to sales in normal, good, and bad months and counts how many months there are of each. A common mistake is to then try to do the same thing with costs, finally subtracting costs from sales in order to get profits week by week and month by month. The problem is that since both sales (S) and costs (C) are relatively large numbers compared to their difference (S - C = profit) and since both S and C are usually estimated with substantial errors in this reconstruction process, profit is often estimated with an extremely large error compared to its size since it is calculated as the difference between two large numbers, both with sizable errors.

The better procedure, used by leading MFIs, is to first estimate either sales or costs (whichever can be reconstructed more reliably) and then apply a percentage margin to it in order to obtain the other. This leads to a much more accurate estimate of business profits (and avoids, for example, the common pathology of initially obtaining negative profits when profits are estimated as sales minus costs). The microentrepreneur often knows the margin (s)he has, and with experience, loan officers come to know these percentages as well since they normally fall in a narrow range for a given type of activity in a given area.[11] The resulting profit calculation normally subtracts out only variable costs and so fixed costs (such as rent, utilities, loan interest, and other overhead items) must then be subtracted out to finally get business profits. It appears that IPED does not avail itself of this strategy for more accurately calculating microenterprise profits to as great an extent as do leading MFIs, which use it extensively not only for commercial enterprises but also for those engaged in service and manufacturing activities.

Portmore CDF employs a somewhat complex cash flow calculation, which is useful but needs supplementation. The cash flow of the microenterprise is simulated month by month over the life of the loan, up to a maximum of 12 months. The additional complexity over what leading MFIs normally do is that profits are carried over from one month to the next in order to see if the enterprise can afford the purchases it is projected to make in each month. This can be especially useful if the enterprise makes lumpy purchases during the loan repayment period (for example, from periodic importations of goods for resale). The difficulty is that the simulation starts by crediting the business with its initial cash on hand. Thus, the business could lose money in every month and still show a positive cash balance at the end of every month as long as the initial cash on hand were sufficient to absorb these losses during the life of the loan (or at least for the 12-month simulation period if this is less than the life of the loan). The MFI would then be in the position of lending to a money-losing enterprise, a potentially risky proposition, especially if the loan term goes beyond the 12-month simulation period. This problem could be corrected by supplementing this useful analysis with a simple calculation of the business' profit in each month in isolation (without any carry-over of cash), the more typical computation used by leading MFIs. Profits could be calculated in normal, good, and bad months and the loan could be sized so that repayment is reasonably assured even in bad months, as noted earlier.

Portmore CDF virtually insists that its loan applicants have written sales records. While this unnecessarily restricts the loan applicant pool,

[11] For example, based on many detailed profit margin calculations that they have done, Portmore CDF has found that the markups over the cost of goods sold by their clients typically fall in the following ranges: bars 45-50 percent, retail grocery 19-21 percent, wholesale grocery 11-15 percent, and retail hardware 23-25 percent.

reduces portfolio growth, and drives up the cost of finding new clients, it should not increase loan delinquency rates.

Willingness to Pay

Best practice MFIs make a detailed investigation and assessment of the borrower's character and his/her likely willingness to repay the loan. This evaluation is based on visits to the business site and home and on talks with business associates, neighbors, friends, and relatives.

In contrast, the procedure used by IPED is overly formalistic, inefficient, and not sufficient to separate good credit risks from bad. Applicants are asked to bring to IPED as many as 26 documents and other items as part of the loan granting process—including, for example, two written letters of recommendation; photos of the applicant, collateral, and business; affidavits of ownership and valuation; ID card; and certificates of title or lease. This imposes significant transactions costs and loan approval delays on the applicant; it typically takes first-time loan applicants 1-2 weeks to gather all of these materials together, especially the two reference letters. At the same time, the analysis of these documents falls well short of telling IPED whether the applicant really is the sort of responsible person who would repay the loan. The two written reference letters were not deemed to be very useful by IPED itself: "less than useless" in the words of one senior IPED official—indicating the potential for being misled by overly positive reference letters. IPED loan officers would do better to place more emphasis on conducting personal interviews with a small selection of the applicant's business associates, neighbors, friends, and relatives. The loan officer would then be able to assess the people making the recommendation, ask them questions and follow-up questions directly, hear their answers more spontaneously, and note their tone of voice and body language—all in an effort to try to distinguish overly-biased from genuine information and to get to the bottom of the question of the applicant's reliability and character. Face-to-face questioning also allows people to speak more candidly about the loan applicant and to say things that they may not be willing to put on paper. Loan officers who are used to going to a loan applicant's home and business in search of people to talk to and other clues about the applicant's character and reliability will find such clues in many other ways, for example: how well these places are organized and maintained, whether the applicant has books in the house, whether there are children in the house and how they appear, whether the applicant is well known in the neighborhood or may be more transient, and whether the applicant is involved in church, parent-teacher associations, or other community organizations and thus is more rooted in the community.

Compared to IPED, Portmore CDF does not have such a long list of documents and other items for loan applicants to assemble. However, like IPED, its loan analysis is based more on making sure that the items it has asked for have been supplied and on verifying whether the applicant's cash flow and collateral meet the standards that have been set. The best practice character analysis described above does not appear to be employed by IPED or Portmore CDF. In contrast, both JNSBL and MEFL do an excellent job of screening loan applicants for their potential reliability in repayment, and this appears to be one of the major factors explaining their very low delinquency rates.

Collateral

Best practice MFIs require that their loans be collateralized with household goods, tools and equipment, other physical collateral, or cash. Cosigners (for individual loans) and group guarantees (for group loans) may be used in place of physical collateral in whole or part. Where physical collateral is used, the minimum ratio of collateral value to loan size varies among leading MFIs, but normally falls in the range of 70 to 150 percent. Some MFIs allow different percentages for different kinds of clients, with lower percentages used especially for repeat borrowers with good repayment records and for those borrowers with strong businesses and cash flows.

In general, the four Caribbean MFIs have adequate collateral practices, though Portmore

CDF's insistence that all loans be 25 percent collateralized with cash before the loan is granted and IPED's requirement that some loans have as much as 200 percent collateralization may unduly restrict the loan applicant pools of these two MFIs and slow their portfolio growth. For purposes of delinquency control, however, the loan underwriting methodologies used by Portmore CDF and IPED really fall down by failing to do an adequate character analysis and instead relying too much on the more easily quantified elements of loan underwriting: collateral and cash flow. Finally, as discussed below in the section on Loan Product Design, MEFL's use of cash collateral may have some undesirable (and probably unintended) consequences.

Transactions Costs and Loan Delays

Best practice MFIs minimize the transactions costs they impose on borrowers and the length of time it takes from loan inquiry to loan disbursement. These practices increase the value to borrowers of the MFI's credit services, and thus encourage client loyalty and repayment.

As can be see in Table 8, the two MFIs with high delinquency rates (IPED and Portmore CDF) impose more transactions costs on new loan applicants and take longer to process and disburse a first loan than the two MFIs with low delinquency rates (JNSBL and MEFL). All four MFIs are reasonably efficient in these regards at handling repeat loan requests.

Best practice MFIs also minimize the costs that their loan underwriting process imposes on their own staff, in order to reduce their own operating costs and enhance profitability. In best practice MFIs, loan officers typically spend 80-90 percent of their time in the field, mainly identifying new clients, analyzing new and repeat loan requests, and trying to collect delinquent accounts. JNSBL and MEFL structure their lending methodology so as to achieve these high percentages while IPED and Portmore CDF do not. In the latter institutions, loan officers spend only 40-50 percent of their time in the field. Loan officers in these two MFIs spend too much time preparing and presenting loans for approval, talking to walk-ins, and doing other tasks that keep them from the field—and not enough time in the field doing such things as character assessments and developing new business.

Loan Collection

The presence or not of a strong and effective loan collection program is probably the single most important factor that explains why some MFIs have low loan delinquency rates and others have high delinquency rates. An important element of such programs that one finds in best practice MFIs is the production and distribution of reports every morning showing all clients with delinquent loans as of the end of the previous day. These reports are delivered to all loan officers and possibly management, so that delinquent clients can be contacted that same day, or the next day at the latest.

While Portmore CDF, JNSBL, and MEFL all produce and distribute daily delinquency reports, IPED does not. Although IPED has been trying to upgrade its MIS for some time to make this possible, it has suffered a series of setbacks, and also faces the difficulties of the limited telecommunications infrastructure present in Guyana. As a result, IPED's loan officers are not given daily reports showing which of their clients are delinquent, but instead must take their own time to create such reports, which they typically do twice a week. These reports exclude payments made by clients at post offices and within the week at IPED's 11 branch offices, and the reports may contain errors due to the manual transcription of data on repayments made at locations other than IPED's headquarters—all of which further limits their utility.

The response of loan officers and other personnel to delinquency at JNSBL and MEFL are models of best practice, whereas IPED's and Portmore CDF's responses are relatively slow, formal, and inactive, and thus are far less effective. For example, MEFL loan officers call the delinquent client on the first day of delinquency. This call is done in a friendly way, as a reminder, and has a strong exploratory content: why was the payment missed? If the loan is still delinquent by day three, the loan officer's supervisor calls with a stronger message. By day

seven, the loan officer is meeting with the entire group (nearly all loans are group loans in MEFL) and telling them with utmost clarity that all group members are in serious danger of losing access to future loan services. A first written notice is delivered at the group meeting and a second notice on day 10. By day 14, a demand notice is delivered, and if the loan is not settled on that day, references and family members are called in order to further pressure delinquent clients and obtain payment. MEFL also has the right (as specified in its loan contract) to print a picture of delinquent clients in the newspaper and to take legal action to recover the money it is due. So far, MEFL has not had to resort to these last two actions.

JNSBL loan officers also call clients on the first day of delinquency and then deliver a first warning letter on day three if the client has not made arrangements to pay. These actions are followed by a series of visits and warning letters, leading up to a third and final delinquency notice on day 15 for those who appear completely unyielding and unlikely to repay or as late as day 30 for other delinquent clients. If the loan is still not satisfied, a bailiff is then dispatched to seize all of the client's loan collateral within 2-3 days after this last notice is delivered. If the sale of the collateral turns out to be insufficient to settle all outstanding debts, JNSBL will go to court to recover as little as US$ 170. Outside lawyers charge JNSBL US$ 85 per case plus 20 percent of whatever they recover, a low cost made possible by the fact that the lawyers handle a batch of these cases at once.

As can be seen in Table 9, IPED and Portmore CDF are slower and less forceful in responding to delinquency. Portmore CDF loan officers bring by a deficiency notice about one week after a loan becomes delinquent. This misses the chance to give the client a reminder phone call on the first day or two of delinquency that is friendly but that at the same time signals the seriousness with which delinquency is viewed. IPED's initial response to delinquency is similarly anemic: loan officers bring by a deficiency notice to clients within four to seven days of the loan becoming delinquent, though if the client cannot be located, the notice is sent by mail. In contrast, by day seven, MEFL and JNSBL have had at least three contacts with clients and are getting very serious and tough.

After its initial response of a hand-delivered letter, Portmore CDF follows up by hand-delivering second and third deficiency notices once the loan becomes 30 and 60 days delinquent, respectively. It then turns the matter over to a bailiff for collection if payment has still not been received. This procedure lacks the force of MEFL's and JNSBL's repeated client contacts within the first two weeks of delinquency and thus fails to give clients a signal that collection efforts will be very tough. To its credit in this regard, in the second week of delinquency, IPED seizes one of the items that the client has pledged as collateral (typically a television or music set, which are both items that the client will miss very much). However, IPED then takes another month to seize the remaining collateral and institute legal proceedings. Compared to JNSBL and MEFL, Portmore CDF and IPED also appear to be more accepting of excuses from clients about why they could not repay, and this also contributes to the much higher delinquency rates observed in the latter two MFIs.

Loan Officer Incentive Pay

In best practice MFIs, an important percentage of a loan officer's overall remuneration comes from an incentive pay scheme. In good incentive pay schemes, the amount of incentive pay earned by a loan officer is determined by his/her portfolio delinquency rate and loan volume. These schemes normally put a particular premium on keeping delinquency rates low, as is appropriate given the threat to the MFI posed by high delinquency rates (see earlier discussion). Thus, these incentive pay schemes reward loan officers for doing a good job in loan underwriting (screening out bad credit risks) and loan collection—reinforcing these critical aspects of the lending methodology. Good incentive pay schemes also reward loan officers for greater lending volumes (which can be measured in a number of ways) because greater lending volumes are also important in helping the MFI to achieve sustainability and profitability.

Table 9 Credit Methodology Issues: Loan Collection

	IPED	Portmore CDF	JNSBL	MEFL
Are loan delinquency reports prepared daily for the loan officers?	No. Loan officers must use the MIS to create their own delinquency reports through an involved process. These reports exclude payments made at post offices and within the week at branch offices. Loan officers create and check delinquency reports only twice a week.	Yes. Every day, support staff prepare a 1st overdue notice for all clients falling delinquent the previous day.	Yes. Every morning the loan officers (and management) receive a report covering all loan delinquencies through the end of the previous day.	Yes. Every morning the loan officers (and management) receive a report covering all loan delinquencies through the end of the previous day.
Branches included in loan tracking system?	No. Payments made in IPED's 11 branches are manually entered once a week (based on paper receipts shipped to headquarters), giving rise to reporting delays and potential data input errors.	Yes. Payments made in Portmore CDF's 2 branch offices are captured for purposes of the next day's delinquency notices.	Yes. Payments made at any of the 23 JNBS branches or 5 post office locations used by JNSBL are captured in the next day's delinquency report.	Yes. While MEFL has no branches at present (April, 2005), clients may repay loans at any of Scotiabank's 32 branches. All such payments are captured in the next day's delinquency report.
Initial response to loan delinquency	Relatively slow and formal: a letter signed by the loan officer's supervisor or branch manager is brought by the loan officer to the client within 4-7 days. If client not located, letter is sent by mail.	Relatively slow and formal: a letter signed by the loan officer's branch manager is brought by the loan officer to the client after about 1 week	A model of best practices (see text)	A model of best practices (see text)
Subsequent responses to loan delinquency	Relatively slow, formal, inactive, and forgiving: partial collateral seizure in 2nd week after delinquency; rest of collateral seized and legal proceedings begun in 2nd half of 2nd month after delinquency	Relatively slow, formal, inactive, and forgiving: after 30 days the loan officer brings by a 2nd late notice with somewhat stronger wording; after 60 days a demand letter is delivered and the matter is turned over to a bailiff for collection (including possible collateral seizure and court action)	A model of best practices (see text)	A model of best practices (see text)

Table 10 Other Credit Methodology Issues and Product Design

	IPED	Portmore CDF	JNSBL	MEFL
Is there an appropriate loan officer incentive pay scheme in effect?	No. No incentive pay scheme in use at all.	No. While a scheme is used, it is extremely complex and overwhelmingly rewards loan volume, rather than loan quality (low delinquency).	A model of best practices (see text)	Appears to be along best practices lines (see text)
Are there important rigidities or defects in the loan product design?	No	No	No	Yes: a) Group loans—all group members must have the same size loan b) Group and individual loans—all borrowers must save 1% of the loan amount per week. These forced savings cumulate from one loan cycle to the next and are not sufficiently accessible to borrowers (see text).
Are routine loan monitoring visits made?	Yes. For all loans, credit is considered to be supervised, with all clients visited at least 1-2 times per month.	Yes. For all loans, a single visit is made to the client within 30 days of loan disbursement to make sure the loan has been used for the agreed-upon purpose.	Almost no. For 1st loan only, a single visit is made to the client within 2 weeks of loan disbursement to make sure the loan has been used for the agreed-upon purpose.	Yes. All loan clients (group or individual, new or repeat) are visited at least once per month.

We observe major differences among the four Caribbean MFIs in this area, with JNSBL and MEFL utilizing best practice incentive pay schemes, Portmore CDF using a deficient scheme, and IPED employing no scheme at all (Table 10). The incentive pay schemes used by both JNSBL and MEFL put a premium on keeping delinquency rates low, as is appropriate. These schemes also reward larger loan portfolios and the disbursement of a greater number of new and repeat loans, which are all important for growth and sustainability. For example, to qualify for incentive pay in a given month, loan officers in both JNSBL and MEFL must achieve a portfolio at risk measure of five percent or less for their individual loan portfolios. Minimum loan volume targets must also be achieved. For instance, JNSBL loan officers must disburse an average of at least 12 new or repeat loans per week and must achieve a minimum portfolio size to qualify for incentive pay. For JNSBL loan officers who meet all of these eligibility criteria, the amount of incentive pay they receive for the month is given by several tables that depend on a number of characteristics of the loan officer's portfolio for the month: delinquency rate, outstanding portfolio value, the number of new plus repeat loans disbursed, and the number of new loans disbursed.

In contrast to the schemes used by JNSBL and MEFL, Portmore CDF's incentive pay scheme mostly rewards loan volume. Each loan officer's incentive pay is a function of two indicators: the volume of loans (s)he has disbursed during the month and the volume of loans (s)he has collected during the month. Since loan delinquency affects collections, portfolio quality does have some impact on performance pay. However, the effect is much weaker than in JNSBL and MEFL, where the loan officer must keep his/her delinquency rate at five percent or less or else all incentive pay is lost.

Loan Product Design

As discussed earlier, clients have greater incentives to repay their loans if they are highly satisfied with the package of financial services they are receiving. An important element of this package is the design of the loan product itself.

As noted in Table 10, the loan product designs of the four MFIs are generally satisfactory, with the exception of two aspects of MEFL's loan products. First, MEFL's group loans require all group members to have the same size loan, a rigidity that may cause some clients in the group to be dissatisfied because their loan is too small to meet their needs while other clients in the group are struggling to manage a loan that is too large. Second, all MEFL clients, whether they receive a group or individual loan, must save one percent of their loan amount per week throughout every loan cycle, a requirement that is likely to hurt many clients. These forced savings cumulate in a bank account from one loan cycle to the next and thus can become a substantial percentage of the loan amount after several cycles (and eventually even exceed the loan amount). Clients sign an agreement that MEFL can take these savings to make up for any amounts owed in the event the client defaults on the loan. Also, as a matter of official policy, clients can gain access to these forced savings only if the client leaves MEFL's loan program or in the event of an emergency (such as a hurricane or hospitalization). As an evolving unofficial policy, MEFL allows clients who have had several loans, and thus have accumulated substantial savings, to withdraw some of these savings if the clients ask to do so and have a good reason, such as the need to buy equipment or restock inventory in the middle of a loan cycle. Not all clients are aware of this unofficial policy, however. MEFL's forced savings program could be made more flexible and thus improved, and should be applied equally to all clients, as we now discuss.

As is commonly the case, MEFL has instituted its forced savings program for two main reasons: cash collateral (explained in the previous paragraph) and client savings accumulation. This second reason refers to the fact that by forcing their clients to save, MEFL is introducing them to the discipline and habit of saving and to the possibilities that having a sizable savings balance could open up for them. For example, a sizable pool of savings could be used for emergencies, to pay school fees and other large household expenditures, to buy tools or machinery, or to start another business.

Many MEFL clients are likely to be hurt by the forced savings requirement. These clients could more quickly increase their incomes and escape poverty if they were allowed to take some or all of their forced savings contributions and invest them in their own businesses—for example, as additional working capital or to buy tools and equipment. While MEFL does grant clients access to their forced savings if they have accumulated a substantial sum and ask to use these savings for what MEFL considers to be a good reason, many clients are not aware that they can even make this request. All of this is not to say that there aren't many clients who wouldn't be helped by saving—because they need larger amounts to invest, for example. The critical question is: will these clients save voluntarily when it is in their own best interests to do so, or must they be forced to save because they do not have the willpower to save even when it is in their own best interests? Considering these possibilities, the question can be stated more explicitly: how many clients are harmed by MEFL's forced savings program (because the clients do not need so much savings and would be better off if allowed to save less or nothing at all) and how many are helped by the forced savings requirements (because the clients need at least this much savings but lack the willpower to save)?

While this question is very difficult to answer directly, there *is* ample evidence that the old belief that the poor do not save on their own is clearly false. In fact, there is a growing consensus around a new view that the poor may be too poor and vulnerable *not* to save. The poor, like all people, face the possibility of both individual emergencies (such as illness, accidents, death, fire, theft, increased business competition, and job loss) and systemic emergencies (such as recessions, inflation, floods, and hurricanes). These events can exert large downward economic pressures on households. Therefore, poor households, which may already exist on the margins of subsistence, have strong motivations to save, so that they and their families are not pushed by such events into states of even graver deprivation such as severe food insufficiency or even starvation. The poor, like other people, also save for important life cycle events such as marriages, funerals, childbirth, festivals, education, and establishing a household.

There is a wealth of empirical evidence that even the poor save on their own. We do not attempt to review all of this evidence here, but cite only a few examples. Wright (2000, p. 72) notes that there are five savers for every borrower in the renowned Bank Rakyat Indonesia (BRI), a microfinance institution that has long offered both credit and voluntary savings services to many poor people. Another set of institutions that have also offered both credit and voluntary savings services to poor clients for a long time are the Latin American credit unions. Judging from the available survey evidence on client income levels, the poverty rate of credit union clients in Latin America appears to be roughly equal to the poverty rate of the clients of other microfinance institutions in the region, approximately 20-50 percent (Westley, 2001). In a recent IDB/CGAP inventory of 273 of the largest and most important credit unions in 11 Latin American countries with major microfinance markets, there were 2.64 savers for every borrower.[12] Both this and the BRI data show that voluntary savings is a much more widespread activity than borrowing. Data on the average size of savings accounts in Latin American credit unions corroborates the survey evidence showing that many credit union savers are poor, thus reinforcing the point that the poor save on their own in large numbers. For example, Branch and Klaehn (2002, p. 9) find that 94 percent of the 120,000 savings accounts in 15 leading Bolivian credit unions are under US$ 500, and have an average balance of US$ 47. Branch (2002) finds that of the 782,000 savings accounts in 22 leading Ecuadorean credit unions, 81 percent are under US$ 100 and 94 percent are under US$ 300. Richardson (2002) finds that 89 percent of the 116,000 savings accounts in four leading Guatemalan credit unions are under US$ 300, with an average balance of US$ 29. Finally,

[12] The 11 countries are Bolivia, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Paraguay, and Peru. There were 3.37 million savers versus 1.28 million borrowers. The data generally refer to December 2001.

Richardson (2002) shows that of the 2.44 million savings accounts in 85 credit unions in Bolivia, Ecuador, Guatemala, Romania, and the Philippines, 94 percent are under US$ 300, with an average balance of US$ 33.

In light of this new view that the poor have strong reasons to save and that large numbers of them do in fact save voluntarily, MFIs with forced savings programs such as MEFL's should reconsider the wisdom of these requirements. This is because such programs eventually result in many clients having substantial savings balances (20-30 percent of their loan amounts or more) that they cannot access or don't know that they can access. Such MFIs may well be depriving many of their clients of the capital they need to expand their businesses now and grow their own way out of poverty. For this reason, we suggest that MEFL consider moving toward a uniform policy that permits all clients to access their forced savings whenever they want, subject to maintaining a minimum percentage of their loan amount in the savings account as cash collateral. As MEFL gains greater experience, it may want to discard its forced savings program entirely, just as Latin American MFIs largely abandoned this element of their group loan methodology in the 1990s. Instead of utilizing forced savings as cash collateral, MEFL could follow the Latin American group lenders and rely on their clients' desires to access high quality financial services and MEFL's provision of such services as the fundamental motivator of loan repayment. MEFL could also offer savings services on a voluntary basis, which would be based on the non-patronizing idea that poor clients are normally rational and generally act in their own self interest—saving when it is best for them to do so. As Wright (2000) discusses, programs of voluntary, liquid savings can lead to larger savings balances than programs of forced, illiquid savings.

Loan Monitoring

In best practice MFIs, loan officers do not normally visit loan clients during loan repayment unless there is a specific reason to do so such as: the loan has become delinquent, a hurricane or other shock has hit an area, the loan officer learns that the borrower is sick or has other problems, or the loan officer just happens to be nearby and so may pay a quick visit with minimal travel time. The reason for this practice is that routine visits are simply not cost effective. It is better for loan officers to spend their time promoting products, screening applicants for new or renewed loans, pressuring and collecting from delinquent borrowers, and trying to head off arrearages in accounts with signs of potential trouble. As shown in Table 10, only JNSBL comes close to meeting this ideal. While excessive monitoring probably does not greatly affect MFI delinquency rates (either up or down), it does increase the operating costs of the MFIs and likely reduces their sustainability.

Pathways to Profitability and Beyond

If JNSBL and MEFL are the best of the four MFIs at the core business of making loans and recovering a high percentage of the resulting portfolio, then why are they not the most sustainable and profitable of the four MFIs? Returning to Table 7 and its FSS sustainability measure (percentage of total adjusted costs covered by revenues) and AROA profitability measure (adjusted return on assets), we see that Portmore CDF ranks highest on both of these measures and MEFL ranks lowest. We now discuss these seemingly paradoxical results and also offer some possible paths by which each of the four MFIs could compile a track record of profitability, something that none have yet accomplished (see the FSS and AROA measures in Annex A). As discussed earlier, such a track record, in addition to being an end in itself, also opens the doors to overcoming the final two challenges of microfinance, accessing commercial funding and attracting private, for-profit equity investment.

Because the latest year of MEFL data (found in Table 7) correspond to only its second year of loan operations, it is hardly surprising that MEFL's sustainability and profitability indicators should be as low as they are. More interesting is the case of JNSBL, which is in year five of loan operations and thus has had time to overcome startup problems, put many initial investment and other costs behind it, and build up a substantial loan portfolio. With the FSS measure

indicating that JNSBL's revenues cover 91 percent of its adjusted costs,[13] JNSBL is close to achieving sustainability but is still not there yet. By way of comparison, the average MFI in Latin America has an FSS ratio of 102 percent, slightly above full cost recovery.

JNSBL charges one percent per week flat interest on its loans, a very high interest rate that, together with its low delinquency rate, results in a high portfolio yield of 93 percent.[14] This portfolio yield is 49 percentage points above the Latin American average of 44 percent. However, this advantage is more than counterbalanced by JNSBL's high operating costs. The ratio of operating costs to average gross loan portfolio is 87 percent in JNSBL, 60 percentage points above the Latin American average of 27 percent.

Why are JNSBL's costs so high? Based on the data in Table 7, productivity is one possible answer. The number of borrowers per loan officer in JNSBL is only 236, compared to the Latin American average of 353. While there is definitely room to improve performance in this area, JNSBL's support staff are much more efficient than their Latin American counterparts, giving JNSBL a ratio of borrowers to total staff of 114, nearly equal to the Latin American average of 128. Therefore, although staff efficiency could certainly be improved, it does not appear to be a major contributor to JNSBL's high operating cost ratio vis-à-vis that of Latin America.

One might also be struck with what appears to be the high average remuneration level of JNSBL staff, of over US$ 15,000 per year. While this *is* high compared to the compensation paid by many Latin American MFIs, many of these MFIs operate in countries that are much poorer than Jamaica. As noted in Table 2, Jamaica's GDP per capita is just over US$ 3000, which means that the average annual staff remuneration of JNSBL is just over five times GDP per capita. This is actually below the Latin American peer group average of 6.1 given in the *Microbanking Bulletin,* issue no. 9 (not shown in Table 7). Although a somewhat crude test, this analysis suggests that JNSBL's remuneration levels may not be out of line with the Jamaican standard of living and with what is typically paid to MFI personnel. A more detailed investigation of local labor markets would need to be made in order to better determine whether this is really true.

The major reason that JNSBL's ratio of operating costs to average gross loan portfolio is so high appears to lie not in factors such as productivity and wages that affect the numerator of this ratio, but, rather, in factors that affect the denominator. In particular, the average outstanding loan balance per borrower is only US$ 299 in JNSBL, versus US$ 816 in Latin America. As a

[13] Adjustments are made for in-kind subsidies and for funding, provisioning, and inflation costs in order to eliminate subsidies from the FSS and AROA measures and render these sustainability and profitability indicators more comparable across MFIs. The Table 7 footnotes describe these adjustments. The adjustments we make are similar, though not identical, to those made in the *Microbanking Bulletin* and explained in the *Microbanking Bulletin's* Appendix I. The two major differences between our procedures and those used by the *Microbanking Bulletin* are in the areas of inflation costs and provisioning. On inflation costs, we multiply the inflation rate times all of the MFI's equity—rather than equity minus fixed assets, as done in the *Microbanking Bulletin*—and then subtract the result from profits. The reason for the procedure we have adopted is that while it is true that the value of real estate tends to rise with inflation, our four MFIs mainly rent, rather than own, their premises. Thus, their fixed assets largely consist of equipment and vehicles, whose value does not generally rise over time with inflation. As for provisioning, Table 7 shows that the average Latin American MFI reporting to the *Microbanking Bulletin* has a loan loss reserve equal to 120 percent of their 30-day portfolio at risk. We adopt the slightly more liberal loan loss reserve standard of 100 percent of the 30-day portfolio at risk. The *Microbanking Bulletin* uses a more complex rule for determining the size of MFI loan loss reserves involving the 90-day and 180-day portfolios at risk, which we could not implement due to lack of data.

[14] Flat interest is computed on the original loan amount, rather than on the outstanding balance. For example, clients with a $100 loan and a flat interest rate of one percent per week pay $1 per week in interest all during the repayment period, regardless of their outstanding loan balance. Portfolio yield is defined in Table 7.

percentage of GDP per capita, the difference is even more striking: the average outstanding loan balance per borrower is 10 percent of GDP per capita for JNSBL vs. 57 percent for the Latin American peer group. Thus, JNSBL is located in a middle-income country and is paying middle-income country salaries, while making exceedingly small loans. This appears to be the fundamental contradiction in its operating model and the main reason it has not achieved profitability.

The previous discussion of JNSBL's loan underwriting criteria suggests a neat solution. Recall that JNSBL utilizes an extremely conservative underwriting standard: loan payments must be less than 25 percent of household savings in the low period (Table 8). Increasing this percentage over time up to the best practices level of 70-80 percent would allow JNSBL to substantially increase its loan portfolio, decrease its operating cost ratio, and probably improve client satisfaction and retention rates at the same time. If done with reasonable care, JNSBL should be able to avoid overlending and any significant increase in its loan delinquency rates—all while maintaining its focus on the low-income clientele it has traditionally served. Other possible ways for JNSBL to reduce its operating cost ratio include the following: continue to expand the number of borrowers in order to take advantage of the economies of scale that exist in the provision of financial services (which are largely a product of economizing on back-office and other central-services costs); explore whether it is worthwhile to continue utilizing all 23 JNBS offices used by JNSBL or whether profitability could be increased if JNSBL focused more on a smaller number of branches; increase average loan size by reaching out to a greater number of higher-income clients, who would typically demand larger loans; and finally, as noted earlier, explore whether labor productivity could be increased, especially for loan officers. Some of these suggestions, including the liberalization of JNSBL's underwriting criteria, require that JNSBL acquire significant additional loanable funds, either from the parent company (JNBS) or from other sources.

Even though IPED and Portmore CDF are much weaker at delinquency control than JNSBL and MEFL, they have a major advantage in the quest to achieve sustainability: they make much larger size loans. The average outstanding loan balance per borrower is US$ 1088 in IPED and US$ 2206 in Portmore CDF, versus US$ 299 for JNSBL and US$ 151 for MEFL. Since the costs of making and collecting loans of different sizes is relatively fixed, an MFI can achieve a much lower ratio of operating costs to average gross loan portfolio simply by serving clients who need larger size loans. Portmore CDF has the additional advantage of paying relatively low wages of about three times GDP per capita, versus 5-6 times GDP per capita in the other three MFIs.

What can IPED and Portmore CDF do to achieve a track record of profitability? The most obvious suggestion is to implement the best-practice lending methods discussed in the preceding section and thus bring down loan delinquency rates to single digits and hopefully to below five percent. A reduction in delinquency rates reduces loan provisioning costs, increases loan income and portfolio yield, and has a number of other benefits discussed earlier. In addition, improving lending methods by reducing transactions costs for borrowers and the time it takes for new clients to receive a first loan helps increase client satisfaction and retention rates, which has a number of salubrious effects on MFI sustainability. With a greater percentage of clients satisfied and remaining with the MFI, client growth rates will increase, not only because there will be fewer dropouts but also because new clients will likely become easier to attract. This will increase revenues and profits, with profits rising particularly as clients remain in the program longer and take out larger loans. The MFIs will also avoid the high costs of replacing dropouts with new clients who must be put through a costly initial credit screening process and typically start out with much smaller loans. Beyond improvements in lending methodology and delinquency rates, the loan officer and total staff productivity ratios in IPED and Portmore CDF are quite low compared to the Latin American peer group (Table 7), and would seem to offer interesting avenues for reducing costs. Whether IPED and Portmore CDF should try to or could increase their profitability by in-

creasing loan rates on their relatively larger and longer term loans is less clear. This question should be tackled in a market study that examines client satisfaction and the availability, cost, and desirability of alternative sources of credit.

MEFL's pathway to profitability is fairly obvious, at least in the short run: continue to expand its client base and credit portfolio, while maintaining its excellent control over loan quality. MEFL's ratio of operating costs to average gross loan portfolio of 341 percent is artificially high because of startup costs and the fact that clients are new and haven't had much time to progress to larger loan sizes. This ratio will naturally come down as MEFL continues to expand operations, as it has been doing. (For example, the number of clients has grown from 939 in September 2004 to over 1500 in May 2005.) MEFL could also try to increase its loan officer and total staff productivity ratios up to at least the average levels for Latin America, though, again, MEFL's numbers may be artificially low because it has so recently begun lending operations. Finally, MEFL could implement the changes in lending methodology and loan product design discussed in the preceding section, which should give it a more accurate assessment of client ability to pay and should also increase client satisfaction and retention rates.

Conclusions

Caribbean MFIs need not simply be prisoners of small markets distorted by government subsidies. They too can implement best practice lending methodologies and achieve low loan delinquency rates. Two Caribbean MFIs, JNSBL and MEFL, have shown the way, with impressive track records of delinquency control. Once delinquency is controlled, Caribbean MFIs can then go on to compile a track record of profitable operations and ultimately access commercial funding sources and attract private, for-profit equity investment. And as a result of this process of institution building, MFIs in the Caribbean will be able to serve greater numbers of microentrepreneurs with improved credit and other financial services.

Governments and donors can play an important role in implementing the strategies recommended in this paper for strengthening MFIs. They can do this by directly strengthening the MFIs through the provision of technical assistance support and by helping to expand MFI loan portfolios by providing funding to these institutions. With respect to the latter strategy, governments and donors should avoid making loans to MFIs that can mobilize deposits or borrow commercially (including from their parent company) in amounts and tenors sufficient to meet their funding needs. Moreover, the interest rates charged by governments and donors on portfolio funding should be increased over time as a means of transitioning MFIs to commercial funding.

In light of the lending methodology problems and related issues identified here (including weaknesses in management information systems and loan product design), government and donor provision of technical assistance to strengthen Caribbean MFIs is especially critical. However, it is important to ensure that such technical assistance money is well spent and has the greatest possible chances of achieving its objectives. The following guidelines may be helpful in this regard:

- Donors and governments should work with MFIs that are genuinely interested in making the kinds of changes discussed in this paper.
- The disbursement of the technical assistance funds should be tranched or otherwise conditioned on measurable performance improvements such as reductions in MFI delinquency rates and increases in sustainability or profitability indicators.
- Serious consideration should be given to tying a substantial part of the pay of the consultants providing the technical assistance to improvements in these same indicators, an idea that worked very well recently in Peru with the strengthening of a set of MFIs there known as the CRACs (*Cajas Rurales de Ahorro y Crédito*).[15]
- In the same way, the amount of counterpart funds the MFIs are required to provide to

[15] This program is IDB/MIF technical assistance no. ATN/ME 6636-PE and was executed during the period July 2002 to December 2003.

help pay the cost of the technical assistance program can be made a function of these same indicators, so that all parties have incentives to pull in the same direction—another idea from the recent Peruvian operation.

Finally, through policy dialogue and possibly policy-based lending, donors can try to convince governments to create conditions conducive to sustainable microfinance. Government-sponsored programs that damage the market with cheap loans to micro and small entrepreneurs and a tolerance for lax loan repayment should be recast on a commercial footing or else greatly scaled back or eliminated. Governments must recognize that they simply do not have the funds to provide subsidized loans to all micro and small entrepreneurs who potentially need credit and could be creditworthy. The only way to adequately serve this market is through commercial microfinance, in which the reinvestment of profits and the use of other funds attracted by these profits permit the rapid growth of lending operations and the eventual provision of high-quality financial services to all creditworthy clients who demand them.

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Annex A Time Trend Data for the Four MFIs

Table A1 Jamaica National Small Business Loans (JNSBL)

Reporting Dates -->	**3/31/2002**	**3/31/2003**	**3/31/2004**	**1/31/2005**
Number of offices (main and branch)	14	19	29	28
Gross portfolio (US$ thousands)	$1,136	$1,142	$1,797	$2,683
Number of borrowers	3,416	3,969	6,520	8,972
Growth rate of US$ gross portfolio (1 year)		0.5%	57.4%	49.3%
Growth rate of number of borrowers (1 year)		16.2%	64.3%	37.6%
Average outstanding loan balance per borrower (US$)	$332	$288	$276	$299
Average loan term (months)	5.0	5.0	5.4	5.5
Portfolio at risk > 30 days (% gross portfolio)	3.3%	1.3%	1.7%	3.3%
Loss provision coverage > 30 days	180%	472%	354%	178%
Operating costs / Average gross loan portfolio		83%	97%	87%
Operating costs / Average number of borrowers (US$)		$265	$269	$251
Borrowers / Loan officers	163	165	176	236
Borrowers / Total staff	81	95	100	114
Average remuneration of all staff (US$ per annum)		$15,170	$16,604	$15,514
Cost of funding liabilities		10.5%	12.9%	6.2%
Portfolio yield		95.7%	107.5%	93.3%
Debt/Equity (=total liabilities/total net worth)	14.9	9.1	6.2	4.0
ROA = return on average assets (before taxes)		-2.5%	-4.0%	1.1%
AROA = adjusted ROA (before taxes)		-6.7%	-8.0%	-5.8%
FSS = % of total adjusted costs covered by revenues	69%	90%	91%	91%

Notes: Data in the table pertain to the one-year period ending at the date shown in each column heading (or for point-in-time data such as portfolio at risk, to the date itself). The only exception is for the last column, where the data cover the 10 months ending in January 2005, but are expressed as annual rates as needed in order to be comparable to the data given for the other years. See the footnotes in Table 7 for explanations of some of these series. Blank cells indicate missing data.

Sources: Inflation rates, bank deposit rates, and exchange rates used in these calculations are obtained from the International Monetary Fund's *International Financial Statistics*. All other data are from JNSBL.

Table A2 Micro Enterprise Financing Limited (MEFL)

Reporting Dates -->	**9/30/2003**	**9/30/2004**
Number of offices (main and branch)	1	1
Gross portfolio (US$ thousands)	$47	$142
Number of borrowers	330	939
Growth rate of US$ gross portfolio (1 year)		200%
Growth rate of number of borrowers (1 year)		185%
Average outstanding loan balance per borrower (US$)	$143	$151
Average loan term (months)	4.0	approx. 4
Portfolio at risk > 30 days (% gross portfolio)	2.7%	5.5%
Loss provision coverage > 30 days	149%	99%
Operating costs / Average gross loan portfolio	1138%	341%
Operating costs / Average number of borrowers (US$)	$1,725	$511
Borrowers / Loan officers	110	117
Borrowers / Total staff	33	55
Average remuneration of all staff (US$ per annum)	$33,070	$17,762
Cost of funding liabilities	4.5%	4.5%
Portfolio yield	51.7%	89.5%
Debt/Equity (=total liabilities/total net worth)	5.0	2.5
ROA = return on average assets (before taxes)	-36.4%	-16.0%
AROA = adjusted ROA (before taxes)	-42.9%	-22.8%
FSS = % of total adjusted costs covered by revenues	20%	32%

Notes: Data in the final column of the table pertain to the one-year period ending on September 30, 2004 (or for point-in-time data such as portfolio at risk, to this date itself). The data in the preceding column cover the period from the start of operations in November 2002 until the end of the fiscal year in September 2003, but are expressed as annual rates as needed in order to be comparable with the data in the final column. See the footnotes in Table 7 for explanations of some of these series. Blank cells indicate missing data.

Sources: Inflation rates, bank deposit rates, and exchange rates used in these calculations are obtained from the International Monetary Fund's *International Financial Statistics*. All other data are from MEFL.

Table A3 Institute of Private Enterprise Development (IPED)

Reporting Dates -->	**12/31/2001**	**12/31/2002**	**12/31/2003**	**12/31/2004**
Number of offices (main and branch)	10	10	11	12
Gross portfolio (US$ thousands)	$4,785	$4,904	$5,775	$5,574
Number of borrowers	4,776	5,036	5,508	5,124
Growth rate of US$ gross portfolio (1 year)		2.5%	17.7%	-3.5%
Growth rate of number of borrowers (1 year)		5.5%	9.4%	-7.0%
Average outstanding loan balance per borrower (US$)	$1,002	$974	$1,048	$1,088
Average loan term (months)	7	7	7	7
Portfolio at risk > 30 days (% gross portfolio)	40.3%	53.6%	47.1%	38.0%
Loss provision coverage > 30 days	45%	42%	47%	66%
Operating costs / Average gross loan portfolio		11.6%	12.6%	14.2%
Operating costs / Average number of borrowers (US$)		$114	$127	$151
Borrowers / Loan officers	239	265	250	223
Borrowers / Total staff	75	77	80	73
Average remuneration of all staff (US$ per annum)		$3,939	$4,809	$5,681
Cost of funding liabilities		3.8%	3.3%	2.9%
Portfolio yield		14.3%	17.8%	22.2%
Debt/Equity (=total liabilities/total net worth)	0.9	1.0	1.0	1.1
ROA = return on average assets (before taxes)		1.8%	2.4%	3.2%
AROA = adjusted ROA (before taxes)		-17.6%	-14.9%	-5.8%
FSS = % of total adjusted costs covered by revenues	55%	40%	45%	69%

Notes: Data in the table pertain to the one-year period ending at the date shown in each column heading (or for point-in-time data such as portfolio at risk, to the date itself). See the footnotes in Table 7 for explanations of some of these series. Blank cells indicate missing data.

Sources: Inflation rates, bank deposit rates, and exchange rates used in these calculations are obtained from the International Monetary Fund's *International Financial Statistics*. All other data are from IPED.

Table A4 Portmore Community Development Fund (Portmore CDF)

Reporting Dates -->	12/31/2001	12/31/2002	12/31/2003	12/31/2004
Number of offices (main and branch)	1	1	2	3
Gross portfolio (US$ thousands)	$293	$454	$756	$1,081
Number of borrowers	344	425	438	490
Growth rate of US$ gross portfolio (1 year)		54.7%	66.7%	42.9%
Growth rate of number of borrowers (1 year)		23.5%	3.1%	11.9%
Average outstanding loan balance per borrower (US$)	$853	$1,068	$1,727	$2,206
Average loan term (months)	14.0	14.0	12.8	12.8
Portfolio at risk > 30 days (% gross portfolio)		17.5%	23.2%	15.6%
Loss provision coverage > 30 days		140%	72%	82%
Operating costs / Average gross loan portfolio		22.1%	29.5%	23.9%
Operating costs / Average number of borrowers (US$)		$219	$408	$471
Borrowers / Loan officers	344	283	292	140
Borrowers / Total staff	172	106	49	41
Average remuneration of all staff (US$ per annum)		$11,627	$8,924	$9,196
Cost of funding liabilities		12.5%	10.5%	9.4%
Portfolio yield		27.9%	28.8%	35.4%
Debt/Equity (=total liabilities/total net worth) [1]	-7.9	-6.4	-13.1	209.4
ROA = return on average assets (before taxes)		-11.7%	1.3%	7.9%
AROA = adjusted ROA (before taxes)		-6.9%	-3.7%	5.6%
FSS = % of total adjusted costs covered by revenues		74%	89%	122%

Notes: Data in the table pertain to the one-year period ending at the date shown in each column heading (or for point-in-time data such as portfolio at risk, to the date itself). See the footnotes in Table 7 for explanations of some of these series. Blank cells indicate missing data.

[1] Negative values of the debt/equity ratio in some years are caused by negative values of equity in those years.

Sources: Inflation rates, bank deposit rates, and exchange rates used in these calculations are obtained from the International Monetary Fund's *International Financial Statistics*. All other data are from Portmore CDF.

Annex B Characteristics of Three Markets for Microfinance: Jamaica, Guyana, and Belize

The following tables are obtained by direct analysis of the most recent available household surveys for the three Caribbean countries for which we could obtain these surveys. The following are the surveys we have analyzed:

- Jamaica—April 2002 Labour Force Survey (provides the data in the first column of the top panel of Table B1, below) supplemented by the 2002 Survey of Living Conditions (provides the remaining data in Table B1)
- Guyana—1999 Survey on Living Conditions
- Belize—1999 Labour Force Survey

These are substantial size surveys, covering 6579, 2608, and 2951 earners for Jamaica, Guyana, and Belize, respectively. In all cases, the surveys are representative of the entire country, not merely the urban areas.

These tables present not only the number of earners of various types, including the number of microentrepreneurs (row 6), but also various characteristics of these earners such as location, age, gender, sector, and poverty rates. A final column presents the share of total household income derived from business profits. Some have claimed that households that are more dependent on business income are more likely to repay their loans on time in order to avoid losing access to loans. On the other hand, households that are overly dependent on a single source of income may encounter greater difficulties in loan repayment due to the lack of diversification of their income sources.

In all tables, blank cells indicate missing data. In the case of the Belize table for the number of poor earners (middle panel of Table B3), the number of poor earners in the subcategories generally do not add up to the total for the entire country given in the first column (e.g., the number of poor earners in urban areas plus the number of poor earners in rural areas does not equal the total number of poor earners for the entire country). This is the only case where such discrepancies occur. They occur because in the case of Belize the total number of earners (top panel) is obtained from the employed population. The poverty rates (bottom panel) are obtained as the percentage of all earners reporting income greater than zero whose reported household income per capita falls below the poverty line. These poverty rates are then multiplied by the totals in the top panel (cell by cell) in order to derive the number of earners in poverty, given in the middle panel. Because the total numbers of earners (top panel) and the poverty rates (bottom panel) are derived from two different populations, the aforementioned discrepancies arise.

Table B1 Analysis of Jamaica's April 2002 Labour Force Survey and 2002 Survey of Living Conditions

Number of Earners

	Entire country	Urban Areas (1)	Rural Areas	Single Major City (2)	Rest of country	Youth (age 24 or less)	Non-youth (> age 24)	Female	Male	Sector					Business Income/ Total Income
										Commerce	Services	Manufac-turing	Agric. & livestock	Other	
1. All earners (=2 + 5)	955,240	399,219	556,021	132,184	823,056	147,865	807,376	397,494	557,746	195,846	249,159	63,191	257,156	189,888	X
2. Employees - all	542,223	283,185	259,038	96,747	445,476	114,466	427,757	259,038	283,185	97,531	201,177	48,609	43,434	151,471	X
3. Of microenterprises	194,592	73,227	121,365	20,228	174,364	40,769	153,823	105,685	88,907	26,500	90,318	7,370	22,736	47,668	X
4. Of larger firms (5+ employees)	347,631	209,958	137,673	76,520	271,111	73,697	273,934	153,353	194,278	71,031	110,859	41,239	20,698	103,803	X
5. Firm owners - all	413,018	116,034	296,984	35,437	377,580	33,399	379,619	138,457	274,561	98,315	47,982	14,583	213,722	38,417	74.8%
6. Of microenterprises	408,627	113,682	294,945	34,183	374,444	33,399	375,228	137,673	270,955	96,433	47,668	14,426	213,094	37,005	74.8%
7. With no employees	387,772	102,549	285,224	30,576	357,196	32,458	355,314	131,400	256,372	90,475	41,866	13,015	208,547	33,869	74.7%
8. With 1-4 employees	20,855	11,133	9,722	3,606	17,248	941	19,914	6,272	14,583	5,958	5,802	1,411	4,547	3,136	75.8%
9. Of larger firms (5+ employees)	4,390	2,352	2,038	1,254	3,136	0	4,390	784	3,606	1,882	314	157	627	1,411	82.8%

(1) Includes Kingston Metropolitan Area (with Portmore and Spanish Town), as well as other urban areas.
(2) Includes only Kingston (excludes Portmore and Spanish Town).

Number of Poor Earners

	Entire country	Urban Areas (1)	Rural Areas	Single Major City (2)	Rest of country	Youth (age 24 or less)	Non-youth (> age 24)	Female	Male	Sector				
										Commerce	Services	Manufac-turing	Agric. & livestock	Other
1. All earners (=2 + 5)	137,045	25,245	111,800	4,547	132,498	22,109	114,936	58,958	78,088	20,855	30,890	5,174	63,505	16,621
2. Employees – all	65,543	16,935	48,609	3,606	61,937	14,583	50,961	35,124	30,420	10,663	26,029	4,234	10,035	14,583
3. Of microenterprises	39,828	8,467	31,360	1,254	38,573	8,467	31,360	23,520	16,307	4,077	21,012	941	5,802	7,997
4. Of larger firms (5+ employees)	25,716	8,467	17,248	2,352	23,364	6,115	19,600	11,603	14,112	6,586	5,018	3,293	4,234	6,586
5. Firm owners – all	71,502	8,311	63,191	941	70,561	7,527	63,975	23,834	47,668	10,192	4,861	941	53,470	2,038
6. Of microenterprises	71,502	8,311	63,191	941	70,561	7,527	63,975	23,834	47,668	10,192	4,861	941	53,470	2,038
7. With no employees	69,777	8,154	61,623	784	68,993	7,370	62,407	23,050	46,727	9,722	4,704	941	52,529	1,882
8. With 1-4 employees	1,725	157	1,568	157	1,568	157	1,568	784	941	470	157	0	941	157
9. Of larger firms (5+ employees)	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Poverty Rates

	Entire country	Urban Areas (1)	Rural Areas	Single Major City (2)	Rest of country	Youth (age 24 or less)	Non-youth (age > 24)	Female	Male	Sector				
										Commerce	Services	Manufac-turing	Agric. & livestock	Other
1. All earners (=2 & 5)	14.3%	6.3%	20.1%	3.4%	16.1%	15.0%	14.2%	14.8%	14.0%	10.6%	12.4%	8.2%	24.7%	8.8%
2. Employees – all	12.1%	6.0%	18.8%	3.7%	13.9%	12.7%	11.9%	13.6%	10.7%	10.9%	12.9%	8.7%	23.1%	9.6%
3. Of microenterprises	20.5%	11.6%	25.8%	6.2%	22.1%	20.8%	20.4%	22.3%	18.3%	15.4%	23.3%	12.8%	25.5%	16.8%
4. Of larger firms (5+ employees)	7.4%	4.0%	12.5%	3.1%	8.6%	8.3%	7.2%	7.6%	7.3%	9.3%	4.5%	8.0%	20.5%	6.3%
5. Firm owners – all	17.3%	7.2%	21.3%	2.7%	18.7%	22.5%	16.9%	17.2%	17.4%	10.4%	10.1%	6.5%	25.0%	5.3%
6. Of microenterprises	17.5%	7.3%	21.4%	2.8%	18.8%	22.5%	17.0%	17.3%	17.6%	10.6%	10.2%	6.5%	25.1%	5.5%
7. With no employees	18.0%	8.0%	21.6%	2.6%	19.3%	22.7%	17.6%	17.5%	18.2%	10.7%	11.2%	7.2%	25.2%	5.6%
8. With 1-4 employees	8.3%	1.4%	16.1%	4.3%	9.1%	16.7%	7.9%	12.5%	6.5%	7.9%	2.7%	0.0%	20.7%	5.0%
9. Of larger firms (5+ employees)	0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Note: Poverty rate calculations use the Department of Labor poverty line of J$ 3015.77 per person per month and household consumption per capita as given in the Survey of Living Conditions.

Table B2 Analysis of Guyana's 1999 Survey on Living Conditions

Number of Earners

	Entire country	Urban Areas	Rural Areas	Youth (age 24 or less)	Non-youth (> age 24)	Female	Male	Sector					Business Income/ Total Income
								Commerce	Services	Manufac-turing	Agric. & livestock	Other	
1. All earners (=2 + 5)	206,750	65,625	141,125	21,565	185,185	77,889	128,861	30,243	16,475	19,353	43,661	97,018	X
2. Employees - all	148,423	50,079	98,344	18,881	129,542	58,838	89,585	11,938	14,686	15,635	25,767	80,397	X
3. Of microenterprises													
4. Of larger firms (5+ employees)													
5. Firm owners - all	58,327	15,546	42,781	2,684	55,643	19,051	39,276	18,305	1,789	3,718	17,894	16,621	66.4%
6. Of microenterprises	58,327	15,546	42,781	2,684	55,643	19,051	39,276	18,305	1,789	3,718	17,894	16,621	66.4%
7. With no employees	48,351	12,415	35,936	2,594	45,757	16,757	31,594	15,478	1,233	3,194	15,064	13,382	65.3%
8. With 1-4 employees	9,976	3,131	6,845	90	9,886	2,294	7,682	2,827	556	524	2,830	3,239	71.6%
9. Of larger firms (5+ employees)													

Note: Since the Guyana household survey does not distinguish firms by the number of employees, we have assumed that all firms with employees have 1-4 employees, both in this table and the next two. By way of comparison, the percentage of firms with 1-4 employees, out of all firms with employees, is 70 percent in Belize and 83 percent in Jamaica.

Number of Poor Earners

	Entire country	Urban Areas	Rural Areas	Youth (age 24 or less)	Non-youth (> age 24)	Female	Male	Sector				
								Commerce	Services	Manufac-turing	Agric. & livestock	Other
1. All earners (=2 + 5)	56,636	7,807	48,829	5,765	50,871	19,341	37,295	4,784	5,084	4,481	17,067	25,220
2. Employees - all	42,214	6,009	36,205	5,416	36,798	15,613	26,601	2,518	4,740	3,589	9,388	21,979
3. Of microenterprises												
4. Of larger firms (5+ employees)												
5. Firm owners - all	14,422	1,798	12,624	349	14,073	3,728	10,694	2,266	344	892	7,679	3,241
6. Of microenterprises	14,422	1,798	12,624	349	14,073	3,728	10,694	2,266	344	892	7,679	3,241
7. With no employees	13,563	1,798	11,765	349	13,214	3,630	9,933	2,266	247	892	7,090	3,068
8. With 1-4 employees	859	0	859	0	859	98	761	0	97	0	589	173
9. Of larger firms (5+ employees)												

Poverty Rates

	Entire country	Urban Areas	Rural Areas	Youth (age 24 or less)	Non-youth (age > 24)	Female	Male	Sector				
								Commerce	Services	Manufac-turing	Agric. & livestock	Other
1. All earners (=2 & 5)	27.4%	11.9%	34.6%	26.7%	27.5%	24.8%	28.9%	15.8%	30.9%	23.2%	39.1%	26.0%
2. Employees - all	28.4%	12.0%	36.8%	28.7%	28.4%	26.5%	29.7%	21.1%	32.3%	23.0%	36.4%	27.3%
3. Of microenterprises												
4. Of larger firms (5+ employees)												
5. Firm owners - all	24.7%	11.6%	29.5%	13.0%	25.3%	19.6%	27.2%	12.4%	19.2%	24.0%	42.9%	19.5%
6. Of microenterprises	24.7%	11.6%	29.5%	13.0%	25.3%	19.6%	27.2%	12.4%	19.2%	24.0%	42.9%	19.5%
7. With no employees	28.1%	14.5%	32.7%	13.5%	28.9%	21.7%	31.4%	14.6%	20.0%	27.9%	47.1%	22.9%
8. With 1-4 employees	8.6%	0.0%	12.5%	0.0%	8.7%	4.3%	9.9%	0.0%	17.4%	0.0%	20.8%	5.3%
9. Of larger firms (5+ employees)												

Note: Poverty rate calculations use the national poverty line of G$ 6086 per person per month and household consumption per capita from survey.

Table B3 Analysis of Belize's 1999 Labour Force Survey

Number of Earners

	Entire country	Urban Areas	Rural Areas	Single Major City (1)	Rest of country	Youth (age 24 or less)	Non-youth (> age 24)	Female	Male	Sector					Business Income/ Total Income
										Commerce	Services	Manufac-turing	Agric. & livestock	Other	
1. All earners (=2 + 5)	78,105	37,245	40,860	24,618	53,487	20,176	57,929	24,138	53,967	5,729	6,332	3,185	21,421	41,437	X
2. Employees - all	53,580	26,609	26,971	18,140	35,440	18,146	35,434	18,138	35,442	4,357	4,575	2,162	12,504	29,983	X
3. Of microenterprises															
4. Of larger firms (5+ employees)															
5. Firm owners - all	24,525	10,636	13,890	6,479	18,047	2,030	22,495	6,001	18,524	1,372	1,758	1,024	8,917	11,455	84.2%
6. Of microenterprises	23,621	10,446	13,174	6,367	17,254	2,000	21,621	5,922	17,699	1,353	1,739	974	8,235	11,319	83.5%
7. With no employees	18,127	7,576	10,551	4,868	13,259	1,767	16,360	5,185	12,942	1,053	1,582	664	6,283	8,544	83.2%
8. With 1-4 employees	5,494	2,870	2,624	1,499	3,995	233	5,261	737	4,758	300	157	311	1,951	2,775	84.5%
9. Of larger firms (5+ employees)	904	189	715	111	793	30	874	79	825	19	19	50	682	135	89.0%

(1) Belize City.

Number of Poor Earners

	Entire country	Urban Areas	Rural Areas	Single Major City (1)	Rest of country	Youth (age 24 or less)	Non-youth (> age 24)	Female	Male	Sector				
										Commerce	Services	Manufac-turing	Agric. & livestock	Other
1. All earners (=2 + 5)	9,227	2,187	6,058	1,142	6,930	1,992	7,264	2,525	6,651	71	946	521	4,158	2,661
2. Employees - all	3,751	1,323	2,204	617	2,744	1,239	2,514	1,352	2,414	36	590	302	1,167	1,431
3. Of microenterprises														
4. Of larger firms (5+ employees)														
5. Firm owners - all	5,461	904	3,809	762	4,149	670	4,740	1,138	4,305	34	364	215	3,054	1,263
6. Of microenterprises	5,783	995	3,918	777	4,356	653	5,080	1,222	4,544	36	353	245	3,092	1,400
7. With no employees	4,681	818	3,307	676	3,525	555	4,107	1,099	3,555	29	301	217	2,696	1,065
8. With 1-4 employees	913	0	552	0	698	103	763	74	819	0	157	0	372	313
9. Of larger firms (5+ employees)	47	0	39		41	15	23	0	48			0	39	0

Poverty Rates

	Entire country	Urban Areas	Rural Areas	Single Major City (1)	Rest of country	Youth (age 24 or less)	Non-youth (age > 24)	Female	Male	Sector				
										Commerce	Services	Manufac-turing	Agric. & livestock	Other
1. All earners (=2 & 5)	11.8%	5.9%	14.8%	4.6%	13.0%	9.9%	12.5%	10.5%	12.3%	1.2%	14.9%	16.3%	19.4%	6.4%
2. Employees - all	7.0%	5.0%	8.2%	3.4%	7.7%	6.8%	7.1%	7.5%	6.8%	0.8%	12.9%	14.0%	9.3%	4.8%
3. Of microenterprises														
4. Of larger firms (5+ employees)														
5. Firm owners - all	22.3%	8.5%	27.4%	11.8%	23.0%	33.0%	21.1%	19.0%	23.2%	2.4%	20.7%	21.0%	34.3%	11.0%
6. Of microenterprises	24.5%	9.5%	29.7%	12.2%	25.2%	32.6%	23.5%	20.6%	25.7%	2.7%	20.3%	25.1%	37.5%	12.4%
7. With no employees	25.8%	10.8%	31.3%	13.9%	26.6%	31.4%	25.1%	21.2%	27.5%	2.8%	19.0%	32.7%	42.9%	12.5%
8. With 1-4 employees	16.6%	0.0%	21.0%	0.0%	17.5%	44.2%	14.5%	10.0%	17.2%	0.0%	100.0%	0.0%	19.1%	11.3%
9. Of larger firms (5+ employees)	5.2%	0.0%	5.5%		5.2%	49.1%	2.7%	0.0%	5.8%			0.0%	5.7%	0.0%

Note: Poverty rate calculations use the US$ 2/day poverty line (in 1985 purchasing power parity) and household income per capita from survey