



**An empirical review of the actual impact of financial crisis  
and recessions on MFIs, and other factors explaining  
recent microfinance crisis**

**Written by:  
Adrian Gonzalez, Lead Researcher  
Microfinance Information Exchange**



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*If things go wrong, don't go with them.*  
-Roger Babson

Many, although not all, of the problems observed in microfinance sectors recently were triggered by the latest financial crisis and fluctuations in both food and fuel prices. At the same time, many problems began before the most recent financial crisis, or were intensified by other elements, including saturated microfinance markets, deficient credit policies and governance structures, and negative policy interventions. The goal of this paper is to identify and share lessons for strengthening microfinance institutions (MFIs) to weather the challenges of future financial crises, fluctuations in food and fuel prices, and other major risks.

The impact of financial crises on both MFIs and their clients depends on several characteristics including: the macroeconomic environment, the level of integration of the country to the global economy, cost and funding structures for the MFI, and the ability of management to deal with crises. The aim of this paper is not to make specific recommendations for individual MFIs, but to identify general lessons for all MFIs. For these lessons to be useful, MFI boards and management have to identify the most important risks for their institutions in order to act on the most relevant lessons for them. For practical implementation, lessons are divided in two categories: *before* the next crisis and *during* the crisis.

The paper is divided in five sections. In the first section the components of financial crises that are most relevant for MFIs are identified, and contrasted with exposure. The second section summarizes the most

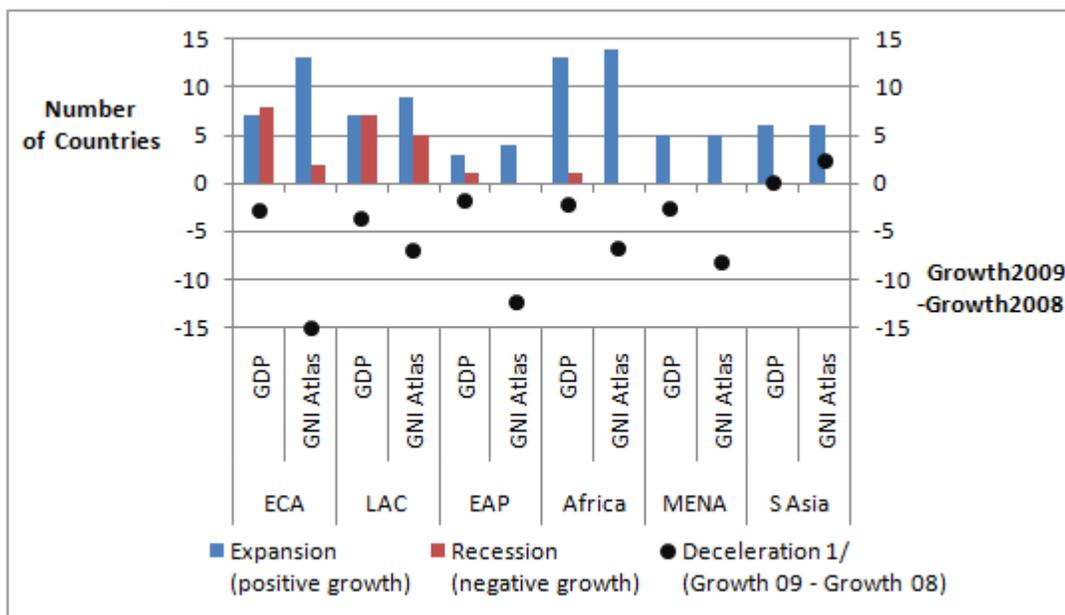
important consequences of financial crisis for MFIs, empirical evidence (when data is available), with particular focus on claims about liquidity crunches, increases in cost of funds and foreign exchange relating them to the components and sub-components of financial crises discussed in the first section. Section three reviews the performance of MFIs during the 2009 financial crisis and explores some of the reasons why the sector as a whole demonstrated less resilience than before. Section four discusses whether a focus solely on financial crises, may lead to underestimating other major risks of serious consequences for MFIs, particularly for portfolio quality. One of the most important new risks discussed in this section is market saturation. Finally, section five summarizes the main lessons for MFIs, donors and governments.

**Section 1: Financial Crises: A Complex and Dangerous Concoction of Risks**

The term ‘financial crisis’ has been used broadly to reference the different international macroeconomic events that were triggered by or coincided with the mortgage crisis in the United States. For developed and developing countries, financial crises had different effects depending on how each economy is integrated with the global financial system. In addition, between developing countries the impact of the recent financial crisis was not homogenous as some regions appear to be less integrated to the global economy than others.

Eastern Europe and Central Asia (ECA) and Latin America and the Caribbean (LAC) were the regions most affected by the 2009 economic recession, while South Asia was almost untouched at the macro level. Of the 58 developing countries with more than four MFIs

**Figure 1: Developing Countries that Experienced Economic Contraction in 2009**



<sup>1</sup> I would like to thank Scott Gaul, Jesse Marsden and Sam-Daley Harris for useful comments and suggestions. All errors and omissions are mine.

reporting to MIX in the period 2008-2009, 17 experienced a contraction in gross domestic product (GDP) in 2009, 15 of these were located in ECA and LAC, as shown in Figure 1. By gross national income (GNI) per capita, the most common indicator used by the World Bank to rank countries by income level, the recent crisis is more visible. Deceleration in growth is shown in Figure 1, with ECA and East Asia and the Pacific (EAP) suffering the most. In contrast with all other regions, none of the five South Asian countries in the sample experienced an economic contraction in 2009, or a reduction in their average growth in comparison with 2008.

In this section, we identify the components of financial crises that are most relevant for MFIs. As each of these components and sub-components have different effects on MFIs, this division is crucial for a proper identification of specific lessons to deal with negative consequences. Changes in food and fuel prices are also discussed at the end of this section. When possible, data from MIX databases and other sources is discussed to evaluate the magnitude of each issue.

### Liquidity and Credit Crunch

In general, liquidity and credit crunches are defined as a contraction of the availability of funding. Their main symptom is a decrease in international investment flows combined with decreases in domestic funding.<sup>2</sup> Liquidity crunches are relevant for MFIs because:

1. Less funding is available for all financial institutions, including MFIs. In particular, for MFIs it is more difficult to attract funding “as capital streams dry-up due to lack of confidence in the repayment capacity of counterparts. This is also happening for [microfinance] funders that get their funding from sources such as pension funds, banks and individuals, which are directly affected by the crisis.” (Wellen and Mulder, 2008).

MIX data on debt (non-deposit sources of funds, excluding equity) suggests that the contraction in MFI funding was not as severe as many expected. 40 percent of MFIs experienced a reduction in debt in 2009, in contrast with 36 percent in 2008.<sup>3</sup> In many countries, MFIs actually increased their funding base as illustrated in Figure 2. As will be discussed later, funding can also decline because of reduced demand for credit products (the MFI needs less funding for their operations), and additional analysis is necessary to identify what percentage of the reductions in debt were actually associated with the liquidity crisis.

2. Cost of funds increases, as perceptions of risk change and funding becomes scarcer (Littlefield, 2008).

**Figure 2: Percentage of MFIs with Decreases in Non-Deposit Funding in 2009**

		ECA			LAC			Africa		
		Country	% MFIs	# MFIs	Country	% MFIs	# MFIs	Country	% MFIs	# MFIs
less 50%		Albania	0	6	Brazil	11	18	Kenya	8	12
		Azerbaijan	14	14	Paraguay	17	6	Senegal	25	8
		Kosovo	14	7	Mexico	26	31	Uganda	25	8
		Bulgaria	42	12	Colombia	26	23	Benin	33	6
		Kyrgyzstan	42	12	Costa Rica	27	11	Mali	38	8
		Tajikistan	42	12	Peru	28	53			
					Argentina	43	7			
more 50%				Bolivia	44	23				
		Kazakhstan	55	11	Haiti	50	6	Cameroon	60	5
		Armenia	60	10	Ecuador	59	39	Ethiopia	60	5
		Georgia	63	8	Guatemala	65	17	Madagascar	60	5
		B & H	77	13	Nicaragua	65	23	Ghana	78	9
		Romania	83	6	Honduras	67	15	Tanzania	80	5
		Russia	87	15	El Salvador	82	11			
Average		50	126	Average	42	283	Average	42	71	

		S. Asia			MENA			EAP		
		Country	% MFIs	# MFIs	Country	% MFIs	# MFIs	Country	% MFIs	# MFIs
less 50%		India	12	73	Palestine	0	5	China	20	5
		Bangladesh	26	27	Yemen	20	5	Indonesia	23	13
		Nepal	29	21	Egypt	27	11	Philippines	42	52
								Cambodia	43	14
more 50%		Pakistan	53	15	Jordan	57	7			
		Sri Lanka	57	14	Morocco	80	10			
		Afghanistan	75	12						
Average		29	162	Average	42	38	Average	38	84	

However, in 2009, more than half of the 374 MFIs reporting cost of funds experienced a decrease, contrary to industry expectations. This is true for all regions, with the exception of South Asia. Globally, 25 percent of the reporting MFIs experienced an increase in their cost of funds over 1 percentage point (i.e. from 5 percent to 6 percent), and only 10 percent of the MFIs experienced an increase of over 2 percentage points. This indicates that most MFIs did not experience a dramatic increase in cost of funds as previously anticipated.

3. Funders prefer shorter-term transactions if “afraid that they are not able to refund their own funding and because they are less sure that they will get their outstanding credits back” (Wellen and Mulder, 2008).

Based on MIX data for 346 MFIs, the average term for debt transactions actually increased

<sup>2</sup> As discussed in the *Recession* subsection below.

+0.2 months from 2008 to 2009, and the median change in term was +0.5 months, suggesting that roughly half of the MFIs experienced an increase in their terms while the other half experienced a decrease. Before the crisis, most MFIs were funded through medium to long term funding, with the simple average term being 54 months in 2008. Consequently shifts of less than a month are of marginal impact given the long terms overall.

- Funders prefer debt in hard currencies, as they become more risk-averse and shift foreign exchange (FX) risk to borrowers. “Foreign exchange risk arises when fluctuations in the relative values of currencies affect the competitive position or financial viability of an organization” (Featherston, et.al. 2006). For MFIs, this risk arises when they borrow in foreign currencies and disburse loans in domestic currency. Under this scenario, MFIs can suffer substantial losses if the value of the domestic currency depreciates in relation to the foreign currency, meaning that the MFIs’ assets drop relative to its liabilities (CGAP, 2006). In addition to the devaluation or depreciation risk, MFIs are exposed to convertibility risk (foreign currency is not available for sale) and transfer or remittance risk (transferring hard currency outside the country is not allowed).

MIX data suggest that in the 2008-2009 period, the average foreign exchange exposure actually decreased 1.4 percentage points, to 25 percent on average, as much as 50percent in ECA, where it actually increased 2 percentage points.

Overall, the recent liquidity crunch did not have the expected effects on microfinance institutions. Funding levels did not decrease in most markets; cost of funds did not increase for most MFIs, foreign exchange

exposure decreased and the term of outstanding debt did not decline noticeably.

### High Inflation Episodes

High inflation episodes are a common risk for MFIs, especially for those operating in countries with weak monetary policies, or unsustainable economic regimes. In the case of MFIs, inflationary episodes could be relevant because of:

- Salary increases due to inflationary spirals: as prices increase, labor markets adjust and salaries go up. In addition, the prices of other inputs may increase as well, affecting both personnel and administrative expenses.
- Changes in relative prices of goods and services bought (inputs and consumption) and sold (produced) by MFIs’ borrowers. This could be caused by different markets adjusting at different speeds, resulting in some goods or services being more expensive than before in relation to other goods and services.<sup>4</sup>
- Changes in food and fuel prices can feed back into inflationary spirals or trigger them in the first place.

In 2009, ten countries in the sample<sup>5</sup> experienced inflation levels between 9%-19% per year. MFIs in five of these countries (Uganda, Tanzania, Egypt, Russia and Nepal) experienced healthy growth in number of borrowers in 2009 with little or no deterioration in portfolio quality. Among the other five countries are India, Pakistan, and Rwanda. For these complicated cases, many forces besides inflation explained their contraction in 2009. Indeed, econometric analysis suggests there is no statistically significant correlation between portfolio quality and inflation (Gonzalez, 2007). This does not mean that MFIs are resilient to

**Figure 3: Countries with Highest Inflation in 2009 and Selected Microfinance Indicators**

Country	Inflation	No. of MFIs	Borrowers Growth		Risk 2009 - Risk 2008		PAR 30		WOR		Risk	
			Avg.	Med.	Avg.	Med.	Avg.	Med.	Avg.	Med.	Avg.	Med.
Egypt <sup>1</sup>	11.8	13	15	10	8.3	1.0	9.1	1.3	1.4	0.1	10.5	2.6
Ghana	19.3	10	-14	-26	4.0	4.4	7.5	5.8	7.0	2.8	14.6	12.5
India <sup>2</sup>	10.9	56	46	36	3.1	0.3	3.3	0.5	2.3	0.4	5.6	1.0
Madagascar	9.0	6	-13	-23	12.2	1.7	13.2	7.5	6.6	3.7	19.7	10.2
Nepal <sup>1</sup>	11.6	18	19	13	-2.2	-1.2	2.9	0.6	3.7	0.9	6.7	1.8
Pakistan <sup>2</sup>	13.6	12	9	12	-1.8	0.8	5.2	1.4	4.0	3.6	9.2	6.3
Russia <sup>1</sup>	11.7	27	4	1	5.2	4.0	9.7	4.1	3.1	0.5	12.8	8.0
Rwanda	10.4	5	-14	-7	8.0	10.4	9.4	9.3	2.6	0.4	12.0	15.1
Tanzania <sup>1</sup>	12.1	5	17	11	4.9	-2.1	14.3	7.3	0.4	0.0	14.6	7.3
Uganda <sup>1</sup>	13.4	6	27	19	2.9	0.6	9.7	3.5	2.4	2.1	12.1	4.9

Notes: Unless otherwise noted, gray cells indicate worst top ten for specific variables.

1/ High Inflation countries with no signs of stress in 2009

2/ High Inflation countries with other shocks in 2009

<sup>4</sup> For simplicity, we are keeping this discussion under the inflation topic, even though, technically speaking from the economic perspective, this is not inflation. More discussion on the food and oil price section.

<sup>5</sup> Those with more than 5 MFIs reporting 2009 data

very high levels of inflation, such as the levels experienced in Zimbabwe in recent years, as hyperinflation makes it impossible for credit markets to function properly.

### High Currency Devaluations

High currency devaluations can happen alone or be accompanied by inflationary episodes. MFIs should prepare for currency devaluations, because they contain serious consequences for the asset-liability management of MFIs.

### Global Recession

Global recession is another catch-all term used to reference multiple events associated with worldwide economic downturn. The most relevant of these events for MFIs include:

1. Higher unemployment and lower domestic demand for goods and services produced by borrowers
2. Lower remittances

3. Deposits and savings withdrawn to weather recession and income shocks
4. Reduced demand for loans for productive activities vis-a-vis increased demand of loans for consumption-smoothing purposes

### Financial runs / panics, loss of trust in financial systems in general

Runs on financial institutions can affect MFIs directly and indirectly:

1. Indirectly, through the failure of non-microfinance financial institutions. This is troublesome if MFIs have any business relationship with the institutions, including:
  - A. Concentration of assets including savings and cash
  - B. Debt or other liabilities
  - C. Cash Management

Figure 4: Selected Countries by Worst Macroeconomic Performance in 2009

Region	Country	2009 Growth Rate		Ranking Lowest Growth		No. of MFIs	Borrowers Growth		Risk 2009 - Risk 2008		PAR 30		WOR	
		GDP	GNI Atlas	GDP	GNI Atlas		Avg	Med	Avg	Med	Avg	Med	Avg	Med
Africa	Benin	3.8	7.1	21	19	5	11	9	-0.7	8.1	14	3.5	8.2	6.4
	Ghana	4.7	3.5	25	13	10	-14	-26	4.0	4.4	7.5	5.8	7.0	2.8
	Madagascar	-3.7	4.9	9	15	6	-13	-23	12	1.7	13	7.5	6.6	3.7
	Mali	4	11	23	26	6	-16	-15	0	-1	4	4	1	1
	Rwanda	4	11	22	25	5	-14	-7	8	10	9	9	3	0
EAP	Cambodia <sup>1</sup>	-2	3	13	10	11	17	15	3	3	3	3	1	1
ECA	Armenia <sup>1</sup>	-14	-7	1	2	9	13	3	2	2	3	2	2	2
	B & H <sup>2</sup>	-3	4	11	14	13	-14	-11	13	10	11	8	7	5
	Bulgaria	-5	6	6	17	20	-2	-1	4	5	9	3	3	0
	Georgia	-4	3	7	11	9	11	5	9	5	10	3	5	4
	Romania	-9	0	2	8	6	-9	-14	12	14	14	16	3	2
	Russia <sup>1</sup>	-8	-3	3	4	27	4	1	5	4	10	4	3	1
	Tajikistan	3	17	18	30	18	-4	-8	4	4	7	5	2	1
LAC	Brazil	-1	8	15	20	20	8	7	-1	0	6	5	6	3
	Costa Rica	-2	3	14	12	9	7	2	5	3	9	8	2	1
	El Salvador	-4	-3	10	5	13	-5	-2	6	7	11	11	4	3
	Guatemala <sup>1</sup>	1	-1	16	7	15	1	2	4	4	8	7	4	3
	Haiti	3	-1	17	6	6	-4	4	4	3	10	8	11	11
	Honduras	-2	1	12	9	14	-16	-11	3	5	13	9	5	4
	Mexico <sup>1</sup>	-7	-10	4	1	35	34	18	2	1	9	4	6	3
	Nicaragua <sup>2</sup>	-6	-5	5	3	22	-15	-22	12	14	16	14	6	6
	Paraguay <sup>1</sup>	-4	6	8	16	6	36	27	2	1	6	5	3	3
MENA	Morocco <sup>2</sup>	5	10	27	23	8	-17	-17	6	6	6	6	9	6
South Asia	Afghanistan	41	20	31	31	11	-15	-30	11	9	24	17	8	4
	India <sup>2</sup>	9	13	30	28	56	46	36	3	0	3	0	2	0
	Pakistan <sup>2</sup>	4	6	20	18	12	9	12	-2	1	5	1	4	4
	Sri Lanka	4	12	19	27	8	0	5	6	3	9	5	3	1

Notes: Unless otherwise noted, gray cells indicate worst top ten for specific variables.

1/ Countries with negative growth and no signs of stress in 2009

2/ Countries with negative growth and other shocks in 2009 or preceding years

2. Directly, through runs by customers of MFIs. During a financial run, MFIs may experience both heavy withdraw of deposits, and deterioration in portfolio quality as borrower doubts the future sustainability of the MFI.

## Food and Fuel Price Shocks

Increases in food and fuel prices, without comparable increases in income, forces borrowers to allocate higher proportions of income to those expenses and directly affects their ability to repay microcredit loans (USAID, 2009). In addition, borrowers may reduce food consumption, migrate in search of cheaper food alternatives, sell productive assets, withdraw savings, or reduce willingness to save in order to buy food (Duflos and Gahwiler, 2008). Substantial changes in food and fuel prices can trigger or increase inflation crises. One important difference between food crises and all risks previously discussed is that food crises clearly compromise the survival of many clients. MFIs may thus feel compelled to engage in additional activities in order to mitigate their effects.

## Section 2: Potential Effects on MFIs

Financial crises involve multiple events with potential serious consequences for microfinance providers and clients. Some of these events affect MFIs directly (like inflation and devaluation), while others affect MFIs indirectly through their impact on funders, borrowers, and the rest of the financial system. The goal of this section is to summarize, from the MFI perspective, the most important consequences of financial crises, relating them back to the previous discussion of the components of financial crises.

The following are the most important expected effects on MFIs due to financial crises and associated events<sup>6</sup>:

1. Reduction in borrower repayment capacity resulting on portfolio quality problems. There are multiple potential causes for this, including:
  - A. Economic recession and reduction in domestic demand for goods and services produce by borrowers
  - B. Reduction in remittances
  - C. Inflation
  - D. Increases in food and fuel prices<sup>7</sup>
  - E. Difficulty dealing with higher interest rates due to increases in MFI costs

2. Higher costs, and potentially, higher interest rates for borrowers
  - A. Higher operating costs due to inflation on salaries and other inputs
  - B. Higher financial costs because of liquidity crunch or inflation

3. Reduced growth due to:

- A. Liquidity crunch leading to less funding available (supply side). It was expected that different types of MFIs would have been affected differently, with NGOs being among the most vulnerable given that they borrow mostly from microfinance investment vehicles (MIVs) and other types of funders exposed to global financial crises. However, MIX data on debt shows that contrary to expectations, only 35 percent of NGOs experienced a reduction in their debts amounts in 2009, in contrast with 51 percent of credit unions and cooperatives, the most vulnerable sector from this perspective, and 40percent for both banks and non-bank financial institutions.

- B. Economic recession leading to reduced demand for loans for productive activities (demand side). According to Glisovic and Reille (2010), in 2008-2009, MIVs witnessed a major slowdown in demand for capital from MFIs, in contrast with high growth rates observed in previous years. This suggests that even though MFIs may experience an increase in the demand for consumption-smoothing loans from new borrowers (borrowers cannot back up this type of loans with revenue from productive activities), most MFIs decide to focus on good practices and lend only to those with high probability of repayment.

- C. Food and fuel crises may trigger deposit withdrawals, and may reduce the willingness and ability of depositors to save through both voluntary and compulsory accounts.

4. Increased foreign exchange losses, due to currency depreciation associated with inappropriate asset liability management could cause real problems for some MFIs (Fitch, 2009). However, as previously discussed, on average 25 percent of all total debt (excluding deposits and equity) is denominated in foreign currency.

<sup>6</sup> Many of these variables are interconnected through multiple channels. The following discussion only highlights the most important connections.

<sup>7</sup>Under certain conditions, food price fluctuations could increase the repayment capacity of borrowers who produce the goods whose prices are increasing, and there are some anecdotes suggesting that this has actually happened. For the present paper, it will be assumed that all changes in food prices are negative for the borrower and the MFI.

5. Deterioration of microcredit repayment culture. This could be caused by multiple reasons including:
  - A. An increase in defaults and arrears in the rest of the financial system.
  - B. Political intervention leading to trends like the “No Pago” movements that recently erupted in Nicaragua.
  - C. Competition by new financial institutions which are more tolerant of arrears and defaults, such as the consumer lenders active in Bolivia during the 1997-2001 over-indebtedness episode (Gonzalez, 2008).

portfolio operating in a country with 100% salaried workers will have an index of 50 percent.

The following assumptions are behind this *formalization index*:

1. Repayment of non-microenterprise loans (consumption, education, mortgages, SME, etc.) is more dependent on salaries than microenterprise loans (which are, presumably, repaid through business income).
2. During recessions, the repayment capacity of salaried workers is affected more than that of informal workers (typically associated with microenterprise loans), as salaried workers lose income when they become unemployed and jobs searches will be more difficult when the economy is growing very slowly or contracting.
3. Informal workers are more accustomed to dealing with economic hardship, and may have multiple sources of repayment when crisis hit or may be more creative in finding new opportunities when formal economies go in recession. This does not imply that informal workers are immune to shocks, but they are more resilient than salary workers (Gonzalez, 2008, Collins, et.al. 2009).

### Section 3: Formalization of Microfinance and Resilience

Before the 2009 financial crisis, it was believed that MFIs were highly resilient to domestic macroeconomic shocks, in particular to GDP contractions and inflation (Krauss and Walter, 2006; Gonzalez, 2007; Ahlin, Lin and Maio, forthcoming). Bangladesh and Bolivia have been used as classic examples of how the microfinance sector has survived regional and national macroeconomic crises and recovered faster than the rest of the financial system (Gonzalez, 2008). However, recent studies indicate that the sector may not be as resilient as previous thought (Wagner, 2010; Di Bella, 2011). These studies argue that the main reason is an increase in the share of domestic formal-sector lending, but this hypothesis has not been validated with data yet.

Incorporating the percentage of salary workers in the index improves comparability across different countries and definitions of “microenterprise loan.”

For this analysis, the 2008 *formalization index* was multiplied by the level of contraction in GDP for 2009 to create a *shock index*. For example, an MFI with a formalization index of 50 in a country where GDP dropped 5% has a shock index of 2.5, while a similar MFI in another country where GDP dropped 10% has a shock index of 5. All MFIs in countries with positive GDP growth in 2009 have a shock index of 0, regardless of their level of formalization.<sup>9</sup>

The analysis of the shock index suggests that, on average, every 1 point difference in the shock index is associated with a 0.31 point difference in their total risk (Portfolio at Risk > 30 Days + Write-off Ratio). The higher the shock, the worse their portfolio quality, as shown in Figure 5. In other words, the impact of the shock is proportional to the level of ‘formalization’ of the MFI.

### Formalization of Microfinance

Forthcoming analysis confirms that the sector was more vulnerable during the 2009 economic recession, in part due to an increase in the share of non-microenterprise lending (e.g. lending for consumption, education, SMEs and mortgages), combined with an expansion of microfinance in countries with more formal economies (as measured by the percentage of salary workers). These were precisely the countries that suffered GDP contractions in 2009 (Gonzalez, forthcoming). In particular, in order to measure the level of formalization, an MFI *formalization index* is defined here by multiplying the percentage of gross loan portfolio for non-microenterprise purposes (from MIX Market product line data) by the percentage of salaried workers at the country level (from World Development Indicators)<sup>8</sup>. By this index, an MFI with 50 percent of their portfolio in non-microenterprises operating in a country with 50 percent salary workers will have an index of 25 percent, while an MFI with the same

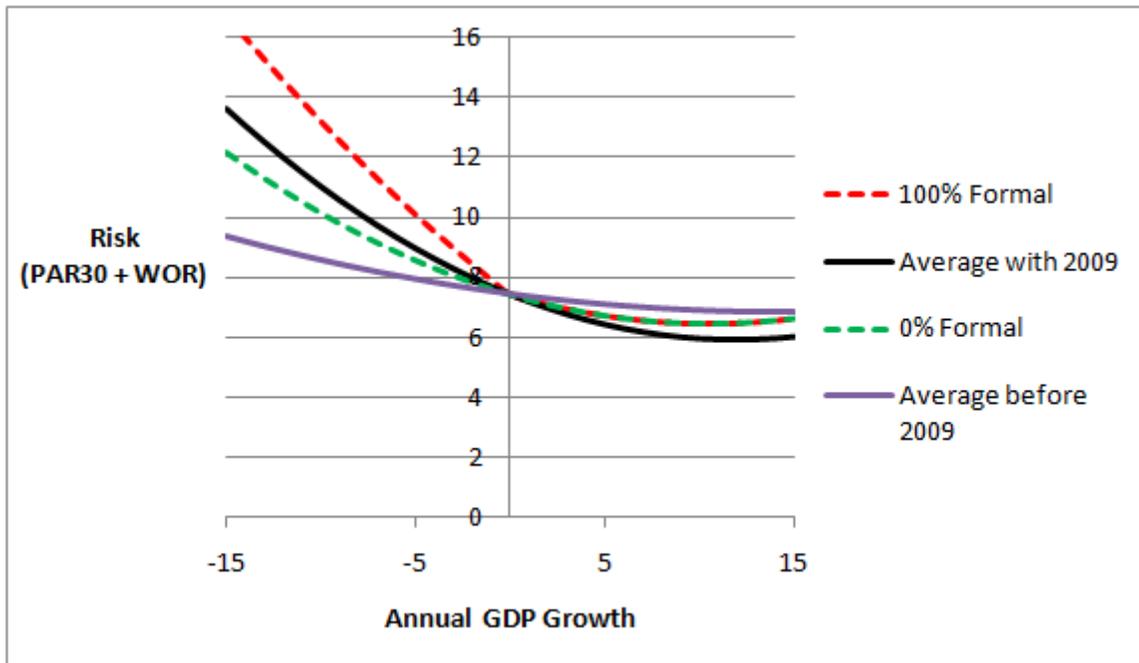
For comparison, both the average relationship between Risk and GDP growth excluding 2009 data and including 2009 data are presented in Figure 5. By this simulation, the sector was more resilient before 2009 because the slope of the curve is very flat. However, by including 2009 data the sector becomes less resilient as the slope

<sup>8</sup> The most recent estimate was used under the assumption that this indicator is relatively stable overtime.

<sup>9</sup> The assumption is that formalization matters more when there is economic recession (GDP) is contracting than when the full economy is growing.

increases, meaning that higher contractions are associated with higher levels of Risk. To simulate the impact of formalization, two additional scenarios are simulated for both MFIs with no formalization and MFIs with 100 percent formalization. Still, the level of formalization does not explain the whole increase in resilience experienced by the sector in 2009 because the 0 percent formalization curve has still a steeper slope than the average curve excluding 2009 data. However, note how MFIs with very high levels of formalization will be even less resilient (Figure 5).

**Figure 5: Simulated Risk by GDP Growth, and Different Levels of Formalization**



At this preliminary stage, more analysis is necessary to understand the full trade-offs and synergies between the formalization of the microfinance industry, including the development of better indicators for the informality and flexibility of borrowers and their risk management strategies when facing recessions. The evidence supports the argument that microfinance has been more resilient than the rest of the financial system because microfinance clients are “different” than the clients of formal-sector financial institutions. This suggests that the factors that differentiate microfinance clients are their flexibility to react to financial crises due to the informal and short-term nature of their economic activities, their diversified economic activities, the flexible supply of household labor, and the incentives to maintain access to credit from current MFIs when access to credit from alternative sources is scarce or expensive (Gonzalez, 2008; Littlefield, 2008).

This result is further relevant for MFIs that provide traditional commercial lending products, such as consumer finance to salaried workers or cash-flow based small business lending, where the clients may have less diversified activities and fewer alternatives to deal with economic crises. MFIs that rely more on consumer or small-business lending appear to be more exposed to financial crises than MFIs that based their

lending on the traditional microfinance lending methodologies like village banking, solidarity groups or individual microenterprise loans (Gonzalez, 2008; Littlefield, 2008).<sup>10</sup> This result has important implications for those trying to expand credit for SMEs through microfinance providers.

#### Section 4: Financial Crisis or Not? New Microfinance Risks

The recent financial crisis was the main trigger for many of the problems observed in 2009, but it was not the only cause or even the main cause in some of the most prominent cases: Bosnia and Herzegovina, India, Morocco, Nicaragua, or Pakistan (Gonzalez, 2010). In this section, we discuss how a focus solely on financial crises may underestimate other major risks for MFIs, particularly from the point of view of portfolio quality and over-indebtedness of the borrowers.

<sup>10</sup> For instance, Syed Moshin Ahmed of the Pakistan Microfinance Network commented that “anecdotal evidence suggests that MF clients who are economically active have been either positive impacted in the first generation effect of inflation or remained neutral. The only group that has been affected is salaried urban class and people who have taken loan for consumption.” Martin Holtmann from International Finance Corporation (IFC) makes a similar point regarding institutions focus on consumer lending or SMEs (Littlefield, 2008).

In particular, Gonzalez (2010) found that high levels of growth are not correlated with portfolio quality problems for individual MFIs, as many MFIs have managed to grow at high levels without experiencing declines in portfolio quality. More important than growth, market saturation has played an important role explaining recent portfolio quality problems in various countries. In particular, on average, countries with penetration of microcredit (total number of accounts per country) of more than 10 percent of the total population have a higher risk of portfolio quality problems. This research also found that the type of growth matters more than the level of growth by itself, as MFIs that grow through expansion into new markets (extensive growth) can grow faster than MFIs growing through intensive growth (adding more borrowers in the same markets/branches). However, in some countries, the opportunities for extensive growth are limited, such as in Bosnia and Herzegovina, where most regional markets are experiencing high levels of competition (Sapundzhieva, 2011).

As microfinance keeps growing in many countries, more MFIs will be experiencing new risks associated with market saturation, and the sector needs to be more cautious and revise their annual target growths in such markets.

## Section 5: Lessons for MFIs

There is no way to forecast when or where the next financial crisis will happen. However, we have to assume that there will be new financial crises and MFIs should prepare. The goal of this section is to identify lessons to help MFIs weather future financial crises. The lessons are organized in two categories: preparing for financial crises, and responding during a crisis.

### Preparing for the Next Financial Crisis: Medium-Term Recommendations

Many useful lessons have been derived from previous financial crises. The focus of this section is on those lessons that need to be implemented before the next financial crisis occurs. These recommendations usually require a medium-term planning strategy and may require significant changes in the way MFIs operate on a daily basis. These are changes that will take time, money and expertise that many MFIs lack and will need to build (Littlefield, 2008).

1. Monitor market saturation in order to avoid over-indebtedness, and adjust growth targets according to market capacity. In addition, grow 'extensively' into new markets and regions, rather than relying on 'intensive' growth (Gonzalez, 2010).

2. Focus on improving lending methodologies, governance and risk management techniques, and information systems as they become critical during periods of stress. Just because everything seems to be working fine in good times, does not mean that it will work in bad times. In the case of lending methodologies, MFIs should review of level of indebtedness of clients prior to disbursement, even and especially in cases of group loans, adapt incentive schemes in areas with high level of penetration, performed detailed analysis of the portfolio quality (by region, by product, by economic sector, by month of disbursement) in order to be able to identify early signs of deterioration of the portfolio quality, and performed annual evaluation of the level of cross-indebtedness either via credit bureaus or through ad hoc analysis of all MFIs databases by an independent third party in case credit bureaus do not exist (Gonzalez and Javoy, forthcoming).
3. Be aware of how clients are connected to the global economy through reliance on imports, exports, agricultural products, tourism, remittances, commodities, etc.
4. Accelerate the move to become licensed to mobilize deposits (Littlefield, 2008). However, not all MFIs are capable or legally permitted to offer voluntary deposits, and violations may undermine the reputation of all MFIs, hurting the entire sector.
  - A. Deposit-taking, and accumulation of reserves in general, is important: Deposit-taking MFIs are well-insulated from refinancing risks (Littlefield, 2008), especially when mobilizing small deposits, and not from large depositors more sensitive to economic downturns. At the same time, deposit-taking MFIs should prepare for deposit runs as well. In addition, drops in remittances caused by global financial recession could hurt deposit mobilization by MFIs. Similar effect could be produce by food and fuel crises (Duflos and Gahwiler, 2008). Moreover, high leverage ratios without adequate supervision increase risk of opportunistic behavior on the side of MFIs.
5. Diversify funding sources: this includes domestic versus foreign funders, international donor or foundations versus commercial investors, domestic savings versus private domestic investors, and regional diversification of international funders as well (Littlefield and Kneiding, 2009).

6. Appropriate matching between assets and liabilities and improve management of foreign exchange risk (CGAP, 2006; Featherston, et.al 2006; Littlefield and Kneiding, 2009).
  - A. Borrow and lend in the same currency to reduce foreign exchange exposure and follow foreign exchange risk mitigation techniques. In addition, MFIs should match terms and conditions of both assets and liabilities as well.
  - B. Implement hedging options to reduce foreign exchange risk. This includes purchasing financial instruments that will protect MFIs against the consequences of adverse foreign exchange rates.

### What to do when the next crisis lands

The focus of this section is lessons to be implemented in the face of a new financial crisis. These are immediate actions that require careful management of daily operations, including communication with clients, staff and funders. According to Rozas (2011), the main actions to be implemented during a crisis can be summarized in a three-step process: 1) insure immediate survival of the MFI, 2) find and repair the underlying problems, and 3) redirect the institution's strategy towards a long-term sustainable path. Clearly, this is more of a conceptual breakdown of the process more than a chronological description, as all steps are interrelated.

1. Insuring immediate survival usually has to be done by taking the right decisions in very short periods of time. Good governance and appropriate risk management policies are critical in bad times (Gonzalez and Javoy, forthcoming).
  - A. Liquidity: According to Rozas (2011), the first priority is maintaining adequate liquidity levels. However, this does not mean hoarding cash. Rozas recommends that "once liquidity is sufficient to meet core operational costs for the immediate period (weeks, not months), the cash must be deployed to address the crisis itself" (Rozas, 2011, p. 24). Maintaining liquidity has been done in a manner consistent with preserving long-term sustainability. This implies that this goal should not sacrifice client confidence and depositor confidence in order to avoid runs on the MFI (Gonzalez, 2008).
  - B. Client confidence: Preserving client confidence should be the second priority during a crisis. Client confidence reduces

repayment problems and helps maintain liquidity. As previously discussed, maintaining client confidence requires appropriate levels of disbursements and sufficient liquidity to accommodate a potential increase in savings withdraws (Gonzalez, 2008; Littlefield, 2008; Rozas, 2011).

- C. Staff confidence is critical, otherwise, dissatisfaction or lack of confidence from staff can quickly disseminate to borrowers and savers, with devastating effects for liquidity and client confidence. Particularly challenging, is dealing with staff cuts and layoffs, and well-prepared management should be ready to act when no other option is available (Littlefield, 2008; Rozas, 2011).
  - D. Creditor confidence should be preserved during a crisis, to help maintain liquidity, as well as ensuring the long-term survival of the MFI (Littlefield, 2008). According to Rozas (2011), in order to maintain creditors' confidence, MFIs need to be transparent and proactive, as in many situations debts will need to be rescheduled or restructured, which may be the best course of action for both players.
  - E. Capital requirements: When applicable, regulated MFIs should satisfy minimum thresholds even during a crisis. This could imply an infusion of fresh equity by new or existing shareholders (Rozas, 2011).
  - F. Focus on expanding access to finance and not on undertaking relief activities (Duflos and Gahwiler, 2008). This is particularly important when dealing with food crises or extreme scenarios where MFIs often feel compelled to do more. One of the most important assets of an MFI is their reputation, and direct involvement in relief activities may compromise the repayment culture they have created. Instead, MFIs can support relief efforts in appropriate ways. In the words of Pride Tanzania: "We sponsor food, but don't distribute it ourselves. We don't want to dilute our image. We are a financial service provider, not a relief organization." (Duflos and Gahwiler, 2008)
2. Find and repair underlying problems. Once survival needs are covered, the priority is finding and dealing with the underlying problems of the crisis. However, there are many causes that go beyond the control of MFIs (like exogenous shocks, including financial or fuel crisis). Regardless of whether MFIs repair

all the problems, they should focus on collections, as an additional source of funds, and in order to keep high confidence levels from all parties (borrowers, savers, investors, and staff). In addition, MFIs could consider more flexible loan policies including rescheduling of loans, lower interest rates, and reductions in compulsory savings requirements (Duflos and Gahwiler, 2008; Gonzalez, 2008). However, all of these actions should not compromise adequate liquidity levels and high confidence levels for clients, funders and staff as previously discussed.

3. Strategic redirection. Crises help uncover weaknesses, sometimes in a painful way. Realizations about high levels of market saturation, or differences in performance between different product types (such as microenterprise versus consumer lending) should be incorporated in the medium- and long-term planning of MFIs (Gonzalez, 2010; Rozas, 2011).

### What (not) to do: Lessons for Policy Makers and Governments

Policy makers should implement policy interventions that are based on solid research, and only when they are directed at the actual cause of the problems causing the crisis. Many agree that policy makers should avoid overreaction and implementation of the negative policy interventions (Littlefield, 2008; Rozas, 2011). Some examples of negative policy interventions include: interest rates caps, as deployed in Andhra Pradesh or Nicaragua (Gonzalez, 2011); payment moratoriums, as seen in Nicaragua (Rozas, 2011); and excessively conservative regulatory actions, such as restrictions on granting new licenses for deposit-taking, increasing capital or reserve requirements or limiting branch expansion (Littlefield, 2008).

In times of food crisis, governments should try to maintain macroeconomic stability to avoid high inflation that can affect the general recovery of the economic system.<sup>11</sup> Governments can also strengthen social safety nets and food security through nutrition and social protection programs, as maintaining adequate caloric intakes is one of the main priorities during food crisis. (Duflos and Gahwiler, 2008; Gonzalez, 2011; Rozas, 2011)

### Lessons for Donors:

Many of the previously discussed recommendations can be implemented faster and better with the support of donors. In particular, donors should ensure that their

funding acts as a catalyst for local funding supporting diversified funding structures for all their partners. Donors should also promote the transformation of strong non-bank financial institutions in order to help them mobilize domestic savings. When tough times arise, donors should stand by long-time clients to help them preserve liquidity levels by rescheduling loans, recapitalizing, and providing emergency funding as necessary. In particular, liquidity facilities could play an important role during crises. However, they should be short-term and priced as a last resort, in order to avoid crowding out local sources of funds or creating disincentives to deposit mobilization. (Littlefield and Kneiding, 2009; Rozas, 2011). It has also been suggested that donors and investors could help MFIs adopt better risk management systems (Duflos and Gahwiler, 2008).

### Conclusions

During a crisis, especially a very intense one, there is no immunization plan that can keep MFIs completely insulated against shocks. However, this paper has identified and discussed many lessons to strengthen MFIs in the face of financial crisis or fluctuations in food and fuel prices. In addition, the paper has discussed some new lessons for strengthening MFIs based on empirical research.

In particular, the more clients of an MFI that are part of the informal sector (i.e. the greater focus on microenterprise lending) and the more informal the labor market (measured as percentage of workers without a salary), the less severe the impact of the recession will be for microfinance providers. Clients are the essence of microfinance, and what truly defines the resilience of an MFI is the resilience of the clients they are serving.

Over the past few years, many MFIs have diversified their portfolios by including non-microenterprise lending (including consumption, education, and SME loans) and microfinance has expanded into countries and regions with a higher degree of integration with the world economy. This increase in the formalization of the sector is one of the reasons MFIs were less resilient during the 2009 economic crisis in comparison with previous ones. Product diversification makes sense from the point of view of expanding access to financial services, risk management and market growth. However, more research is necessary to understand the full trade-offs for the microfinance industry, especially in times of crisis.

This paper has highlighted market saturation as a new risk faced by MFIs worldwide. Its effects can be confused with those of financial crisis and economic recession. This is a new challenge for the industry, as some countries become saturated in several local markets, making extensive growth unfeasible. In these cases, growth targets should be reevaluated in order to prevent future crises, like the ones recently observed in

<sup>11</sup> Macro stability also helps maintaining inflation low, in general a good thing for everybody, but not of direct impact for MFIs or clients as some research suggests.

countries like Bosnia and Herzegovina and Nicaragua, given the current high levels of saturation and limited opportunities for growth.

Finally, preliminary research suggests that one of the most important areas to focus on to strength operations against future financial crisis is lending methodology. Since the core of microfinance for many institutions is lending, this may sound obvious. However, most of the recent case studies of the recent crisis have underestimated the critical role that lending methodologies play, especially during bad times like recessions and portfolio contractions. One important lesson for MFIs in saturated markets is that overestimating market size can increase the risk of overindebtedness in the whole sector. The importance of credit policies are followed by policies for governance and risk management, and by management information systems.

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