

Microcredit Crises Prevention Dashboard

Introduction

The microcredit crises prevention dashboard is one of the outcomes of a research project funded by the European Investment Bank University Research Sponsorship programme (EIBURS)¹. The research aimed to offer an overall analysis of the main microcredit delinquency factors (such as governance, regulation, market saturation, and political influence), from the perspective of **supply**, **demand**, and **socioeconomic and political environment**. It also aimed to look into the exact nature and interaction among identified recurrent factors in different economic, growth and market maturity contexts, with the view to build a typology of delinquency crises.

From a methodological point of view, the research project featured a **multidisciplinary** approach (economics, business and management, political economy, economical anthropology) and **mixed methods**. It combined a comprehensive approach (based on field surveys, mostly observation and interviews with a large range of stakeholders (clients, non-clients, loan officers, branch managers, MFIs' managers, regulators, representatives of apex organisations, informal lenders, etc.) and statistical analysis, based on data from the Management Information Systems of the partner MFIs associated with this project. Four countries were selected as case studies, because of their diversity of situations and the quality of existing or potential partnerships with local stakeholders: Tamil nadu (India), Morocco, the Dominican Republic, and Senegal.

The research was carried out from April 2012 until December 2015 by a team of microfinance specialists with complementary skills and methodologies: economic anthropology and political economy (UMR Développement et Sociétés, Université Paris I Sorbonne/IRD; Département d'Économie politique, Université de Fribourg); applied economics (Lasaare, Université Hassan II, Casablanca), and management (Centre for European Research in Microfinance – CERMi/Université de Mons).

The detailed results of the research have been published in an edited volume (*The Crises of Microcredit*, London, Zed Books, 2015, edited by Isabelle Guérin, Marc Labie and Jean-Michel Servet). In this note, we present an overview of the most salient results in two different – and complementary – ways:

- First, a graph that highlights the **diversity of crises** (country/regional crisis, MFI crisis, client crisis), the **diversity of causes**, and the way they interact with each other within each level and between levels. This is then illustrated by regional case studies that show how the graph can be used in practice.
- Second, a dashboard listing the key elements we observed in different crises and that should be considered as many potential “red flags” to be monitored.

¹ This document has been coordinated by Isabelle Guérin and Marc Labie and involved Eveline Baumann, Davide Forcella, Cyril Fouillet, Solène Morvant-Roux, Fouzi Mourji, Marc Roesch and Jean-Michel Servet. A first version has been discussed and validated by several players in the microfinance sector (practitioners, policy makers, donors, investors, consultants) during a workshop held in Paris on October 8th, 2015. We sincerely thank them for their constructive comments and suggestions. We also received valuable feedback and inputs from Johan Bastiaensen, François Doligez, Marek Hudon, Daniel Rozas, and Ariane Szafarz. However, potential errors and omissions remain the responsibility of the core research team members. The research project "microfinance in crisis" also involved Joana Afonso, Bert D'Espallier, Abdoulaye Fall, Cécile Godfroid, Cristian Gonzales, Santosh Kumar, Philippe Louis, David Picherit, and G. Venkatasubramanian.

The common idea is that it is impossible to consider all microcredit crises in a single way as they can differ not only in terms of their fundamental cause (demand, supply, or environmental issues) but also in terms of their level of impact (clients, MFIs, or regions/countries). Indeed, actors and institutions belonging to either the demand, supply or environmental dimension interact with each other through their decisions and actions: they are guided by habits, cultures, socio-economic constraints, and they are shaped by unequal access to opportunities, asymmetric power relations. Their behaviours form a **complex system** with emerging properties and strong feedbacks. A common future of a complex system is that it does **not simply result from the sum of its parts**, but it has properties and behaviours that originate in the **interactions** among parts, that are inherent to the system as such and that do not belong to any of its parts. Hence a reductionist analysis of each of its part would not allow to assess its collective behaviour that finally supports or generates shocks and crises in the MF sector. Only a **systemic analysis** that not only focuses on specific aspects of demand, supply and environment, or simply clients, MFIs, or countries, but **also looks to assess interactions among parts and understand the emergent behaviours** could grasp the complexity of MF crises and have a chance to provide early warning. However we should not be overoptimistic on the ability of such methodology to actually predict crises. Indeed, by their own nature, complex systems are deterministic but non-predictable, meaning that it is possible to provide warning signals and eventually predict the likelihood of a crisis happening, but we cannot claim if and when it will actually happen. Our work is to be seen as complementary to the Mimosa project that has been developed (mimosaindex.org) with the goal to identify saturation risks on microfinance markets based on comparisons of penetration indicators between markets. What follows is based on our own field work, possibly confirmed by other studies that will be quoted when needed.

I. A Graphic Approach

A graphic approach highlights two main aspects.

1. First, we should distinguish three levels of crises:
 - **Country/regional crises**, defined as situations in which the industry is disrupted because a substantial part of all MFIs are no longer able to operate properly due to MFIs having difficulties themselves, often of a financial or operational nature, related to and/or crystalizing into an aggregate deteriorating or negative context. Usually, this type of crisis is characterized by a widespread drop of repayment rates, usually followed by a drop in the loan portfolio;
 - **MFIs' crises**, with the same defining characteristics as above but at the MFI level;
 - **Clients' crises**, defined as situations in which an important part of the clientele is experiencing difficulties in repaying microloans and is over-indebted. By this we mean that clients have relatively high debt/income ratios, regularly make sacrifices to keep up with repayments, increase their number of loans and have poor prospects of getting out from high levels of debt in the near future².

In some cases, all levels will be affected, in others not. **It is therefore interesting to note that a "crisis" can happen at the clients' level without immediately affecting the MFI (or country level)**, as we will see below in the case of Tamil Nadu or the Dominican Republic. This is one of our key results, which we believe to be crucial as it is hardly

² We combine two definitions of over-indebtedness, one in terms of « sacrifices » (Schicks J. (2013) The Definition and Causes of Microfinance Over-Indebtedness: A Customer Protection Point of View, *Oxford Development Studies*, 41(Supplement 1): S95-S116 (22) and the other in terms of impoverishment through debt (Guérin I., Morvant-Roux S., Villarreal M. (eds) (2013) *Microfinance, debt and over-indebtedness. Juggling with money*, London, Routledge.

visible. Timely repayment is not a fully reliable indicator of repayment capacity. Various strategies, from the clients' side, simply postpone crises: informal finance juggling practices, selling assets, or migration.

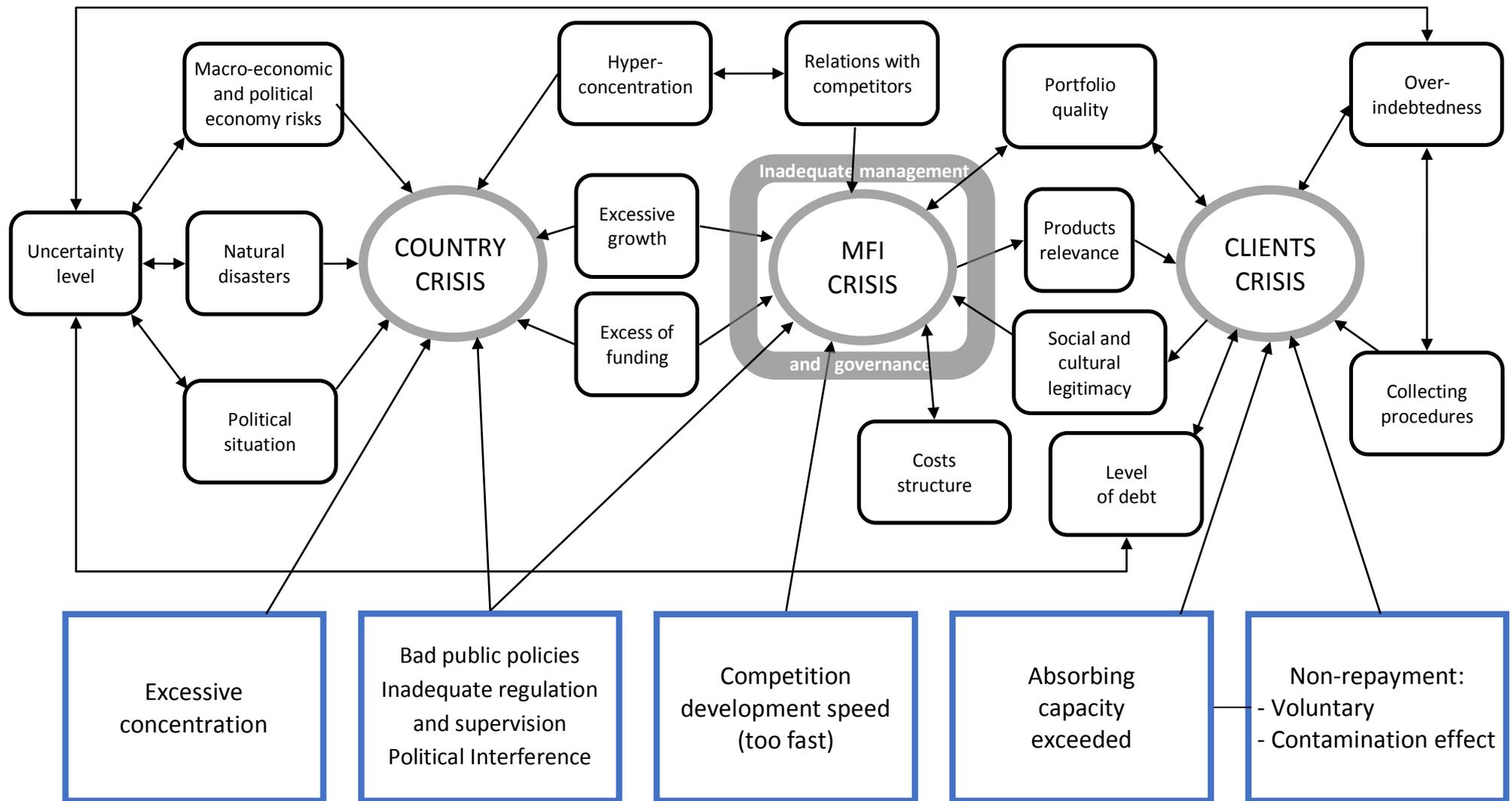
2. Second, the graph highlights the diversity of « explaining items » (black in the graph) and the multiple ways in which they interact with each other.

The way all these items combine with one another is at the core of the graph. Then we can summarize the main “sparkling items” (blue in the graph) as follows:

- At the country/regional level, microcredit crises tend to happen because of 1) **over-concentration** of the supply (which can be geographical, sectoral and/or social – on a specific segment of the clientele) and/or because 2) the environment pushes clients and/or MFIs into wrong behaviours. This includes **“bad” public policies, inadequate regulation and supervision, but also political and external pressures**³.
- At the MFI level, microcredit crises tend to happen for two main reasons (that can be combined)
 - a. organizations face **too high a growth** and then struggle to maintain their performance and the quality of their procedures and social outreach (affecting their embeddedness and legitimacy);
 - b. the environment (**public policies, inadequate regulation, political/external interference**) and **inadequate competition** push MFIs into wrong behaviours. Subsequently, it also leverages opportunistic MFI hopping and non-repayment behaviour among clients. We shall note here that “excessive growth” is always relative: it depends on many factors, especially the organisational structure of MFIs, the degree of concentration, and the absorption capacity of local economies, which are highly diverse (and thus must be observed at the local level).
- At the client level, microcredit crises tend to happen because the characteristics of the products (and the way they are offered) do not match the client's needs, potentials (absorption capacity), norms and values. There are two possible scenarios (that may be combined): 1) The clients' **absorbing capacity** has been exceeded – they got too much credit compared to how much they can repay; 2) There are also cases where clients fail in their repayments, not because they are unable to repay, but because they are unwilling to do so (and **voluntary defaults** may expand quickly through contagion effects). This may be due to political/external interference, but also to the lack or the loss of the MFI's legitimacy.

³ The role of political and external pressures was quite clear in the Andhra Pradesh and Nicaragua crises, without however being the only factors. See Picherit D. (2015) When microfinance collapse: development and politics in Andhra Pradesh, in Guérin, Labie et Servet (eds) *The crises of microcredit*, London, Zed Books, pp. 170-186. And Servet J.-M. (2015) *No Pago*, a social movement against microcredit institutions in Nicaragua, in Guérin et al. (eds), *op. cit.*, pp.152-170.

Graph 1. Systemic approach of microcredit crises



Legend: ○ To be coloured red in case of crises ◻ Explaining items ◻ Sparkling items

In all cases, a central issue is that of “**unsustainable growth**”, here again at different levels (clients, MFIs, country/region). Sustainability should be understood from various angles: financial of course, but also sociocultural (what is the acceptability and legitimacy of MFIs or microfinance as a whole) and political. The issue of political sustainability refers to the power relationships between the various stakeholders, starting with relations between clients and MFIs (how far each party can protect its own interests), to relations with funders (who may play a key role in over-rapid growth) or outsiders (State, political parties or any organised group, who may play a role in eroding MFIs’ legitimacy).

The following case studies (developed in more details in the edited volume mentioned above) illustrate how the graph can be concretely used.

*Tamil Nadu*⁴

Tamil Nadu is a neighbouring state of Andhra Pradesh. In a way, it is a good example of a client crisis that has not yet affected MFIs or country level. Until 2010 (before the Andhra Pradesh crisis), it had the second highest share of borrowers and loans portfolio. At first glance, it might seem that it has been spared by the microcredit crisis. On the supply side (volume of loan portfolios and repayment rates), indicators are green, but at the clients’ level, there is a crisis in the sense that a large part of clients are over-indebted.

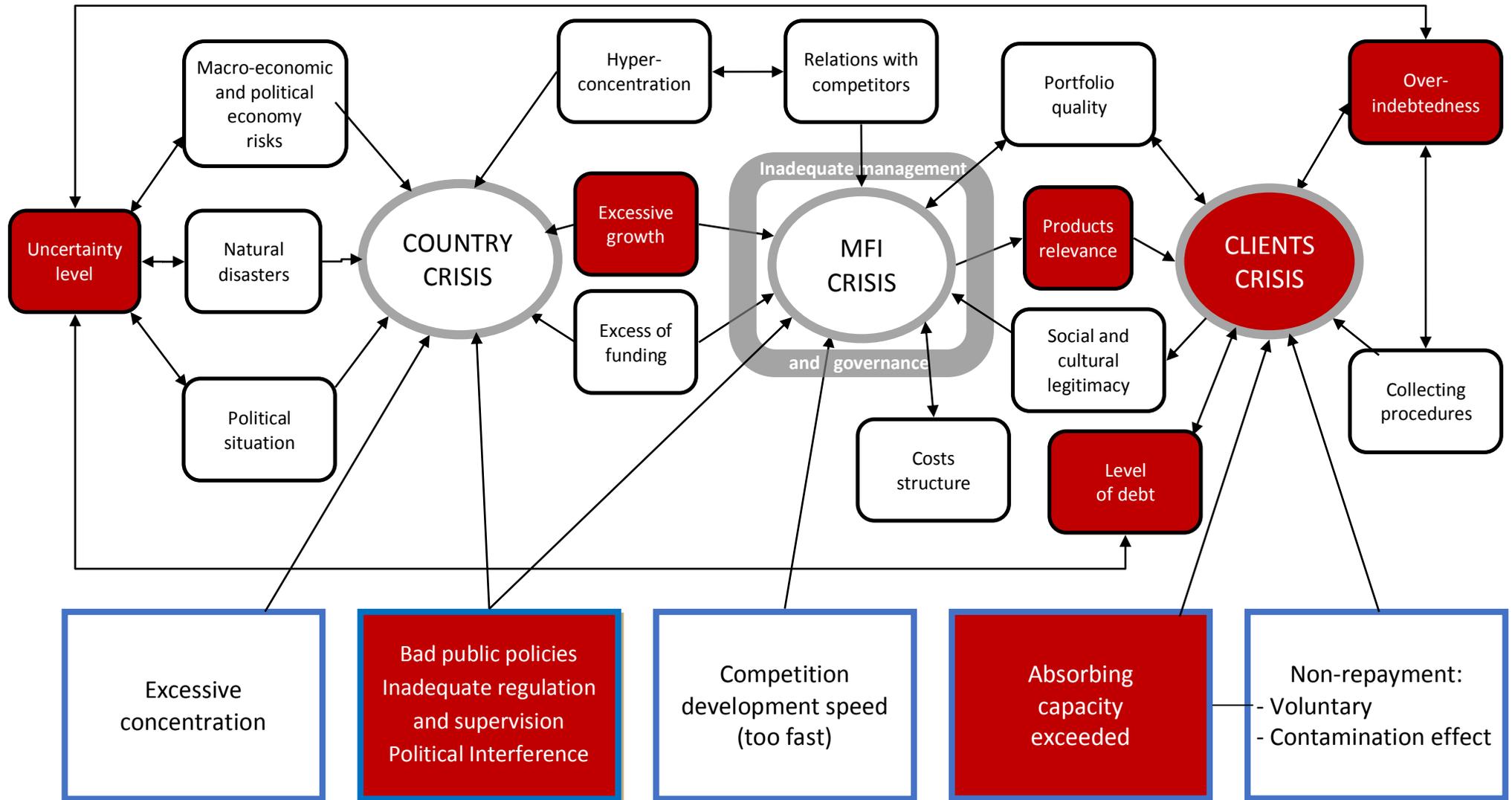
Various factors combine (explaining items are highlighted in bold):

- An important part of borrowers is **over-indebted**.
- Clients were already **highly indebted** before microcredit, mostly for purposes that do not generate income. This is due to both a strong propensity to go into debt (for sociocultural reasons) and rising aspirations for consumerism and upward mobility. Clients juggle with many sources of borrowing, including multiple lending from different institutions (not only MFIs).
- Microcredit often represents only a small proportion of total household debt (informal lending is extremely dynamic and the consumer credit market is also booming), but its **modalities** – rigid instalments that are ill suited to irregular incomes and **growth targets** leading to unbridled supply and commercial aggressiveness – make it particularly dangerous. This is especially the case in a context of **high uncertainty**: employment opportunities remain irregular and uncertain, and most households do not have any proper social protection. Any external shock may then push them into over-indebtedness.
- Since the Andhra Pradesh crisis, various regulatory measures have been adopted (avoiding multiple loans, limiting amounts, checking the uses of loans, etc.), but they are often not respected (**lack of supervision**).

One may wonder how long this can last. In the absence of social protection mechanisms, with a labour market that remains highly unsecure, microcredit contributes to a debt economy that does not seem to be sustainable. For the moment, people are able to manage, in great part thanks to migration to urban areas, but the absorption capacity of urban areas in rural India is not unlimited (especially if one looks at the number of young people who will the labour market in the coming years).

⁴ This section draws on Guérin I. Fouillet C. Kumar S. Roesch M. and Venkatasubramanian G. (2015) Is the demand for microcredit sustainable? in Guérin *et al.* (eds), *op. cit.*, pp. 73-92.

Graph 2. The crisis in Tamil Nadu



Legend: ○ To be coloured red in case of crises ○ Explaining items □ Sparkling items

*Dominican Republic*⁵

The Dominican Republic is also a **case of crisis at the client level**, probably not in the entire country but *in saturated areas* (certain parts of the two main cities, Santo Domingo and Santiago). In this case too, all indicators are green on the supply side. The Dominican Republic is often considered as one of the most successful microcredit industry in the Caribbean region and various seemingly solid indicators of sound and prudent microcredit supply management are in evidence: a microcredit growth that follows GDP growth, a strong professionalism of MFIs, cooperation between MFIs (through crossed training for instance), two private credit bureaus that are widely used, good practices such as financial education measures, etc. However, field observations on the clients' side give a contrasted picture. Many clients in competitive areas of the country endure great financial hardship. The following factors come into play:

- A **high level for debt**, both for productive and non-productive purposes (but when uses are for productive purposes, businesses remain small and fragile).
- **Very coercive collection procedures**, not because of loan officers, but because of the powerful enforcement role of credit bureaus: insofar as people need to borrow permanently, they cannot afford to be blacklisted. In other words, the credit bureaus work very well, but mostly to protect the lenders (and not the clients)⁶.
- In a context of **high uncertainty** (income irregularity, dependency upon remittances from the US, lack of social protection) similar to the one which is frequently characterizing markets where microfinance is thriving, clients can quickly fall into over-indebtedness.
- As a result, and even if portfolio at risk is rather low (PAR at 30 days was 5% in 2013 for the entire sector), an important part of clients are **over-indebted**.
- On the supply side, growth may not be excessive, but it is **concentrated** on certain geographic areas and certain segments of clients: the most creditworthy. In competitive areas, loan officers, constrained by high performance targets (which many cannot meet), are left with no choice but to focus on specific segments of clients (those who are creditworthy on paper), sometimes encouraging them to take on excessive risk. This also leads to **unfair competitive practices**, such as stealing clients from competitors (and credit bureaus may be used for that purpose).

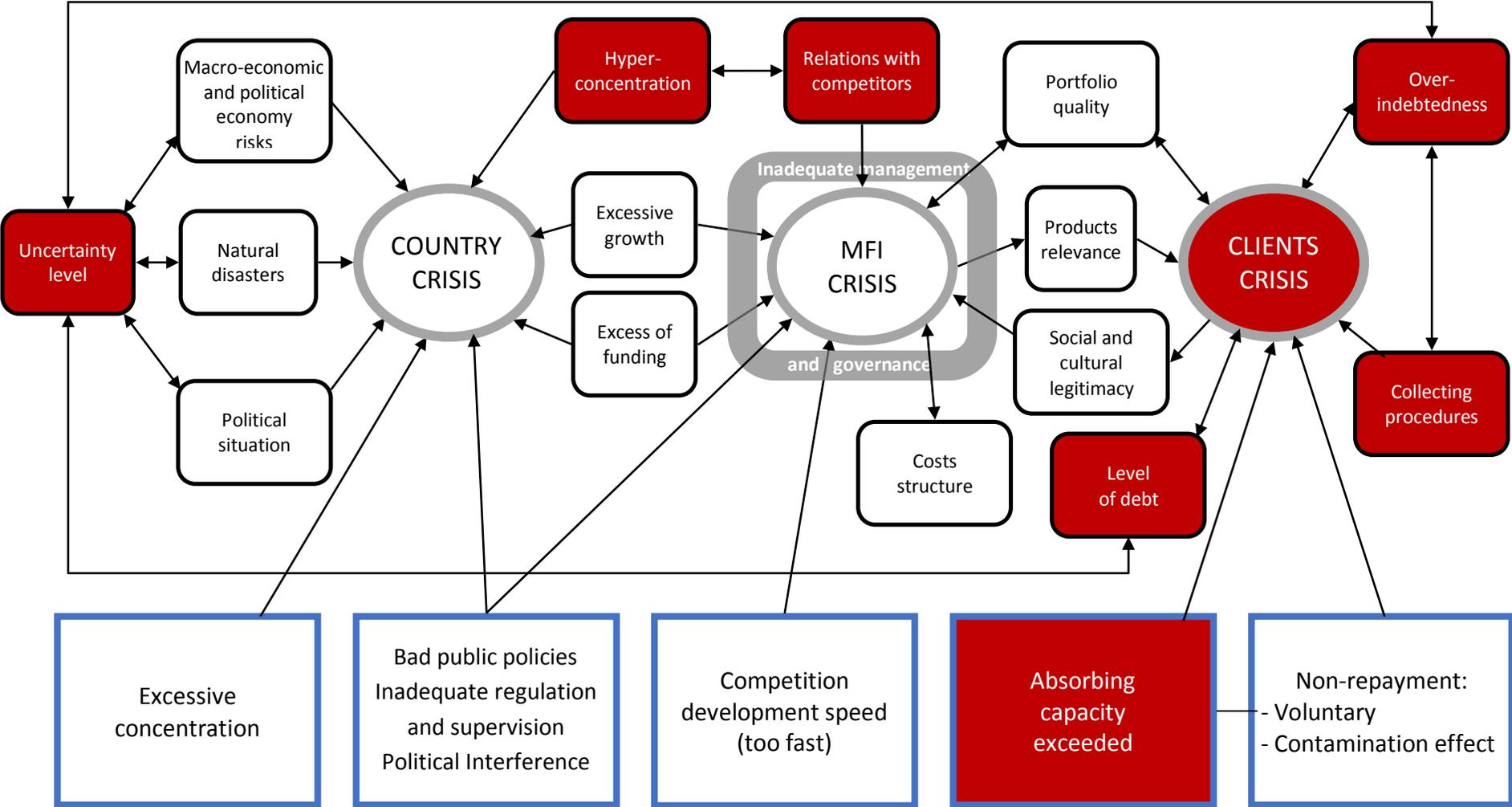
Here too, as in the case of Tamil Nadu or other cases studied by other researchers, for instance Peru studied by Mimosa⁷, one may wonder how long this can last.

⁵ This section draws on Morvant-Roux S., Afonso J., Forcella D., Guérin I. (2015) How good repayment performances can harm borrowers: evidence from the Dominican Republic, *in* Guérin *et al.* (eds), *op. cit.*, pp. 73-92. Gonzales Ch., Servet J.-M. (2014) Pourquoi le microcrédit en République Dominicaine a échappé à la crise ? Unpublished document.

⁶ See also the case of Peru (MIMOSA January 2016, available on demand)

⁷ MIMOSA, January 2016, available on demand.

Graph 3. The crisis in Dominican Republic



Legend: ○ To be coloured red in case of crises ◻ Explaining items ◻ Sparkling items

Morocco⁸

Morocco was hit by a credit delinquency crisis in 2009 after 10 years of excessive growth driven by four leading microcredit providers, all ranked among the top 50 MFIs worldwide in 2007, just before the crisis.

It was first and foremost a crisis at the MFI level. The crisis started with one of the main national microcredit providers (Zakoura) going bankrupt and then spread to the entire industry through contagion. At the country level, and though all MFIs have suffered from the wave of non-repayment, these have remained limited both in terms of magnitude and length (hence the orange colour instead of red in the graph below). At the client level, repayment difficulties were related to both inability and unwillingness to pay, but client's over-indebtedness, for reasons explained below, remained limited (again, the clients' level is highlighted in orange in the graph below).

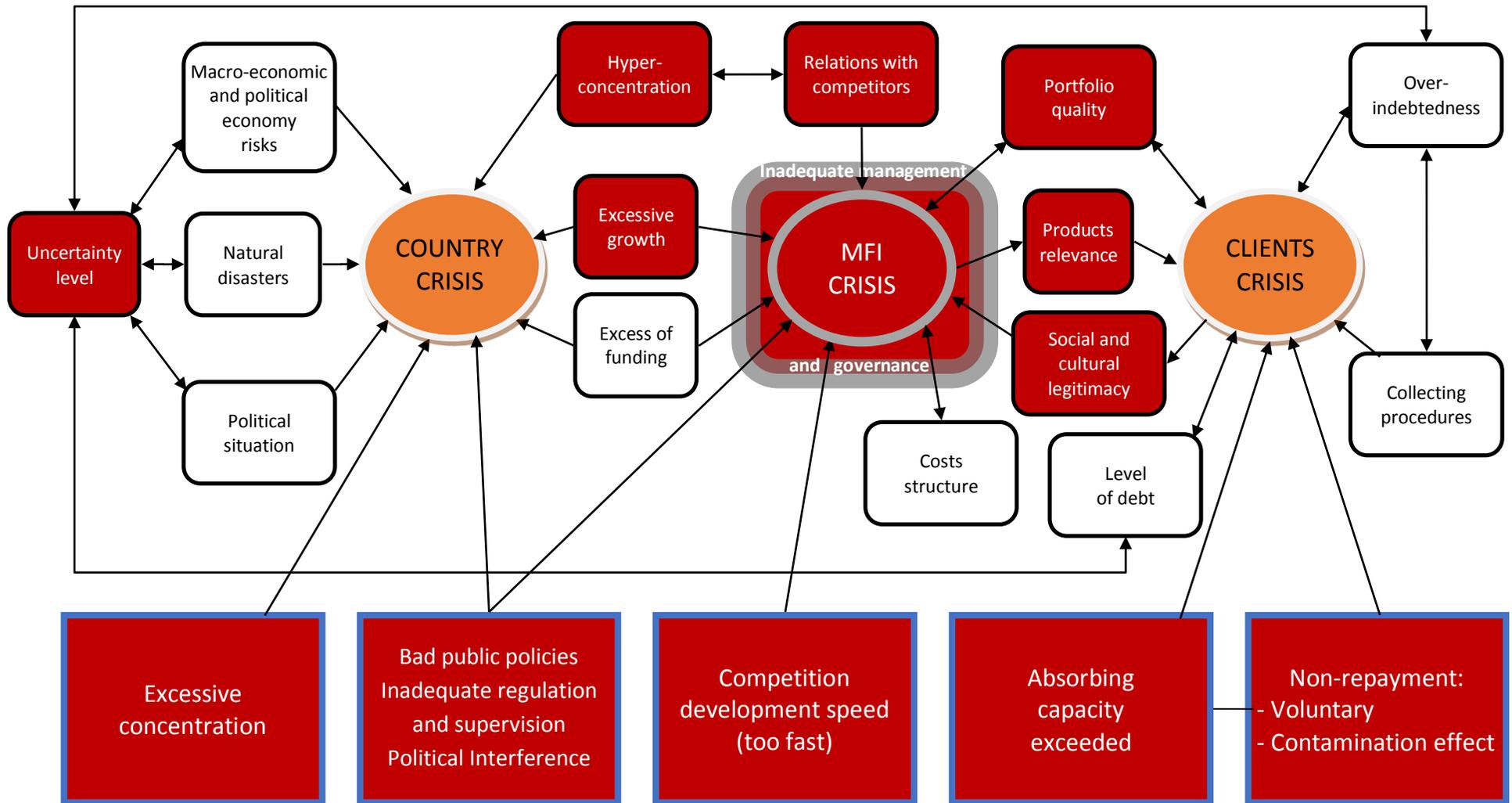
Internal governance problems, **excessive growth**, **high concentration**, **unfair competition** (loan officers stealing clients from each other), lack of close **supervision** are important explanatory items that have been widely documented. Microcredit providers' **lack of legitimacy** also came into play: it has been widely underestimated, although it is crucial to understand the crisis and the present situation. By contrast with the two previous cases studied, the demand for microcredit (and for debt in general) is rather weak, for sociocultural reasons. Low demand also comes from the **inadequacy** of microcredit products in certain contexts (rural areas in particular). Microcredit's low legitimacy has double-edge consequences on over-indebtedness. On the one hand, clients are cautious and rarely fall into vicious circles of debt. On the other hand, and since informal lending is limited (and this is also due the low propensity to borrow), clients quickly face difficulties in repaying their microloans (whereas informal lending is a very common repayment strategy in the two previous cases studied). This is all the more the case that the context is **highly uncertain** (lack of social protection). Cross-borrowing from MFIs (rather high at the time of the crisis) was often the only option people had to repay their microcredit. This lack of legitimacy also explained why loan officers were forced to build very close relationships in order to attract and retain clients. After Zakoura's bankruptcy (most of its portfolio then merged with Attawfiq, the new name of Fondation Banque Populaire), many of its loan officers were fired, breaking the trust built mostly through personal relationships. Finally, the lack of effective sanctions in case of non-repayment was an additional spreading factor.

Following the crisis, a number of measures have been taken both in terms of regulation and management (credit data exchange, cooperation for a better spatial distribution, improvement of internal governance and human management, etc.) to restore the soundness of the microcredit industry, and non-repayment was quickly stopped. Portfolio at risk is still today very much under control. The situation is nonetheless challenging since the issue of legitimacy and trust remains problematic. This probably explains the very limited growth that the sector is currently facing. On the side of borrowers, borrowing is still something that many people are not willing to do (especially in a

⁸ This section builds on Morvant-Roux S. et Roesch M. (2015) The social credibility of microcredit in Morocco after the default crisis, in Guérin *et al.* (eds), Op. cit., pp. 113-132. Mourji F. (2014), Un overview de la microfinance au Maroc : de l'essor spectaculaire à la rupture et aux nouvelles orientations, Unpublished document ; D'Espallier B., Labie M., Louis Ph. Microcredit crises and unsustainable growth : a management perspective, in Guérin *et al.* (eds), Op. cit., pp.23-39. Rozas, D. Pinget K., Khaled M., El Yaalaoui S. (2014) *Ending the Microfinance Crisis in Morocco: Acting early, acting right*, Washington: International Finance Corporation (World Bank group).

depressed economic environment, and especially in touristic areas). On the side of loan officers, and with the crisis fresh in mind, many try to avoid risky borrowers and therefore focus on a very limited segment of clients (the most trustful).

Graph 4. The crisis in Morocco



Legend: ○ To be coloured red in case of crises ◻ Explaining items ◻ Sparkling items

II. Toward a crisis prevention dashboard

The crisis prevention dashboard aims at listing all the key indicators/elements we observed in different crises in such a way that they could be considered as many potential “red flags” to monitor. As for the graph, the idea is that it is impossible to consider all microcredit crises in a single way as they can differ not only in terms of their fundamental causes (demand, supply, or environmental issues) but also in terms of their level of impact (clients, MFIs, or regions/countries). The dashboard is thus organised along these two axes (levels of impact in rows and fundamental causes in columns).

Of course, we do not claim that having some “red flags” automatically means that a crisis will occur. Neither do we argue that all the items share the same role and importance in the development of a crisis. However, we hope to provide a good overview of key elements to focus on.

Table 1. Microcredit crises prevention dashboard

	Demand	Supply		Environment
		Organisational aspects	Financial aspects	
At the client's level	Total debt/repayment capacity Total capacity of borrowing saturated by a single lender Willingness to pay	Inadequacy of products and lending procedures Nature of enforcement procedures	Effective interest rate (including transaction costs)	Cultural and historical image of money and debt Clients vulnerability level (Incomes uncertainty and lack of social security)
At the MFI's level	<p><u>Clients</u></p> <ul style="list-style-type: none"> • Multiple credits (and crossed portfolio) • Turnover variation • Drop-out variation • Over-indebtedness <p><u>Lack of social and cultural embeddedness and/or legitimacy of the MFI</u></p>	<p><u>Institution growth</u></p> <ul style="list-style-type: none"> • Employees: new/total number • Agencies: new/total number • Staff turnover • Procedure for launching new products/services • Inadequate MIS adaptation <p><u>Staff management and Governance</u></p> <ul style="list-style-type: none"> • Incentives • Control • Leadership behaviours • Mission fulfilment • Multiplicity of governance mechanisms and Balance of powers 	<p><u>Portfolio quality</u></p> <ul style="list-style-type: none"> • PAR30 & PAR90 • Write-offs <p><u>Cost covering</u></p> <ul style="list-style-type: none"> • Funding costs • Operational costs (including staff) • Loan loss costs <p><u>Liquidity Mismanagement (of the institution)</u></p> <p><u>Funders, Owners and Investors inadequate pressure</u></p>	<p><u>Macroeconomic risks</u></p> <ul style="list-style-type: none"> • Foreign exchange (FX) risk (if exposed to foreign funding) • Inflation • Specific Political Economy issues (for a sector, a region, ...) <p><u>Judicial procedures efficiency</u></p> <p><u>Interaction with informal lenders</u> Segmentation? Coordination? Competition?</p>
At the country's level	<ul style="list-style-type: none"> • Consumer credit stimulation and practices • Unexpected changes in money transfers (remittances) • Overexposure to a limited number of clients economic activities • Microfinance reputation 	<p><u>Market growth</u></p> <ul style="list-style-type: none"> • Market growth rate <p><u>Nature of the market</u></p> <ul style="list-style-type: none"> • Concentration of supply (clients) • Concentration of supply (products) • Geographical concentration 	<p><u>Available financing</u></p> <ul style="list-style-type: none"> • Amount • Origin 	<p><u>Competition</u></p> <ul style="list-style-type: none"> • Intensity • Origin <p><u>Macroeconomic framework</u></p> <ul style="list-style-type: none"> • Regulation framework • Quality of supervision • Credit bureau • Political risk • Country risks (natural disaster, economic crises, ...)

One practical way to use the dashboard is to list a few key questions that should be asked to see whether there is a risk of crisis or not. If we use the three levels suggested above, an “overall diagnosis” seems possible in 14 questions. Of course, answering those questions is far from easy. In many cases, being able to answer ‘yes’ or ‘no’ will require some kind of benchmarking (for instance, how do we benchmark an acceptable level of sacrifice to make repayment?). Our purpose here is not to provide a toolkit ready to use but to stress the multiple issues that the various stakeholders of the microcredit industry should have in mind should they wish to reduce the risk of crises.

At the client’s level:

- *Is the microfinance client able to repay without making “abnormal sacrifices”?*
- *Is the microfinance client willing to repay?
(the answer to this question is closely related to the legitimacy of the MFI)*
- *Are the services offered to him/her relevant and adequate to fill up his/her needs?*
- *Are the services offered to him/her offered at a reasonable price (from the client’s point of view and from his capacity of repayment)?*

If the answers to these four questions are positive, we have good grounds to consider that, from the client’s perspective, there is no reason to foresee a crisis. If the answer to any of these questions is “no”, of course it does not automatically mean that a real crisis will happen, but it is a reason to worry and to look for improvement.

At the MFI’s level:

- *Are the clients loyal to the institution?*
- *Is the quality of the loan portfolio satisfactory?⁹*
- *Are all the costs well covered in a sustainable way (including the access to subsidies that the MFI has)?*
- *Is the MFI capable of managing its growth rate?*
- *Is governance strong enough to control the operational and strategic development of the MFI?*

If the answers to these five questions are positive, we have good grounds to consider that, from the MFI’s perspective, there is no reason to foresee a crisis. If the answer to any of these questions is “no”, of course it does not automatically mean that a real crisis will happen, but it is a reason to worry and to look for improvement.

⁹ Of course PAR indicators are not great in terms of early signal as their deterioration mean by itself that they are quality issues in the portfolio and that something is already wrong. However, they certainly constitute signals that cannot be ignored.

At the country/regional level:

- *Is there anything that pushes consumers and/or institutions into excessive borrowing/lending?*
- *Is lending excessively concentrated in a circumscribed area or a specific population segment?*
- *Can the way competition is taking place on the microfinance market be considered “unfair” or “unsound” in any way?*
- *Is there any risk of a major macroeconomic crisis or political economy shock affecting MFI customers?*
- *Can the regulation and supervision authorities and the public policies related to microfinance been considered inadequate or dangerous for the microfinance industry?*

If the answers to these five questions are negative, we have good grounds to consider that, from the country perspective, there is no reason to foresee a crisis. If the answer to any of these questions is “yes”, of course it does not automatically mean that a real crisis will happen, but it is a reason to worry and to look for improvement.

Concluding remarks

Most of the time, crises are due to a combination of items that alone would not have had the same effect. As we have tried to show, the factors and the way they interact in order that generate major crises in microfinance are extremely diverse. In some cases, the failure of a major institution will reveal the weakness of the entire industry; in other cases, crises will grow « unnoticed » until they explode due to some context changes. In some cases, wrong incentives, practices or strategies will have to be blamed. In other cases, public policies and their implementation will be blamed. Sociocultural factors, which are instrumental in building the legitimacy of MFIs (and therefore clients’ loyalty), may also play a much bigger role than what is often assumed in the microfinance industry. We shall also note that in all cases, microcredit markets remain fragile because they operate in a context of uncertainty and high vulnerability of clients: lending money to people who have low, irregular income and lack social protection is, by essence, risky.

For all these reasons, it is really not reasonable to say that one can explain why crises have happened in the past or why they will appear in the future. However, even if we accept this need for modesty, we can stress the fact that when one observes past crises, some key features tend to show up over and over again. So, identifying them clearly is certainly not a waste of time. This is what we have tried to do with this research.

We do not claim that our dashboard – in either dashboard or graph version – will allow MFIs and other stakeholders active in the microfinance field to avoid any future crisis, but we have the feeling that it may help. Of course, some will call for “one more step” where the different elements would be put in a set of “standardized ratios”, allowing to “predict crises”. We honestly don’t think that this is possible, for the following reasons : first, some of the elements that we have identified can hardly been quantified (how would you want to put a “number” on the “cultural acceptance of debt” for instance?) ; second, even if we could come up with ratios and figures to be measured for the different items identified, we would still remain with the aggregation challenge (indeed, there is no way to give

a relative importance to all these factors and, as shown by the crises that we have been able to study, relative importance will vary depending on the contexts studied) ; third, one of the main outputs of this research is that it shows the complexity of the interactions between the different types of players (from clients to investors), the different types of contexts, and the different types of crises. This output is by itself the result of a lot of discussions, exchanges, examples. Therefore, trying to summarize it in a few simple metrics would not be meaningful. But of course, we understand that practitioners need to have “practical tools”. This is the reason why we did the effort of summarizing our findings into a table, a graph and a list of key questions to be asked. Evidently, these are not a “ready-to-use solution”, but we hope that it can be a good starting point for those who want to understand how the dynamics of the microfinance field can sometimes deteriorate into sad crises.