MicroBanking Bulletin

# The Tipping Point: over-indebtedness and investment in microfinance

Microfinance Information Exchange

## An exploration into whether investment contributed to microfinance repayment crises, and whether measures of investment activity might serve as early warning signals for future microfinance crises

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2005 marked a turning point for the microfinance industry. The industry burst into public consciousness – the year of microcredit. One year later, one of its brightest lights was awarded the Nobel Peace Prize. Yet, in a number of countries, the first signs of structural problems began to appear, most notably in India, where the first cases of large scale defaults and related suicides appeared in southern India. As Damian von Stauffenberg remarked, "microfinance had entered its adolescence."

Early reports of these events cited rapid growth in loan volume and client over-indebtedness as common denominators. In a 2010 paper, CGAP looked into the origins of crises in Morocco, Nicaragua, Bosnia and Pakistan. The report concluded that in each case, three major vulnerabilities lay at the heart of the problems:

- Concentrated market competition and multiple borrowing
- Overstretched MFI systems and controls
- Erosion of MFI lending discipline

The above suggests a relationship between the level of MFI lending activity in a given market and the deterioration in underwriting standards and operational effectiveness of the MFIs.

The premise behind this is that when multiple MFIs compete in a given market, the targeted clients are at risk of taking on additional borrowing beyond the point where they can meet debt service payments without serious difficulty. Lacking adequate information on individuals' indebtedness and in circumstances where lenders' credit standards may be loosening, this borrower saturation point may be reached before lenders realize. Thus, there is a need to look for reliable early signs of potential over-lending by MFIs.

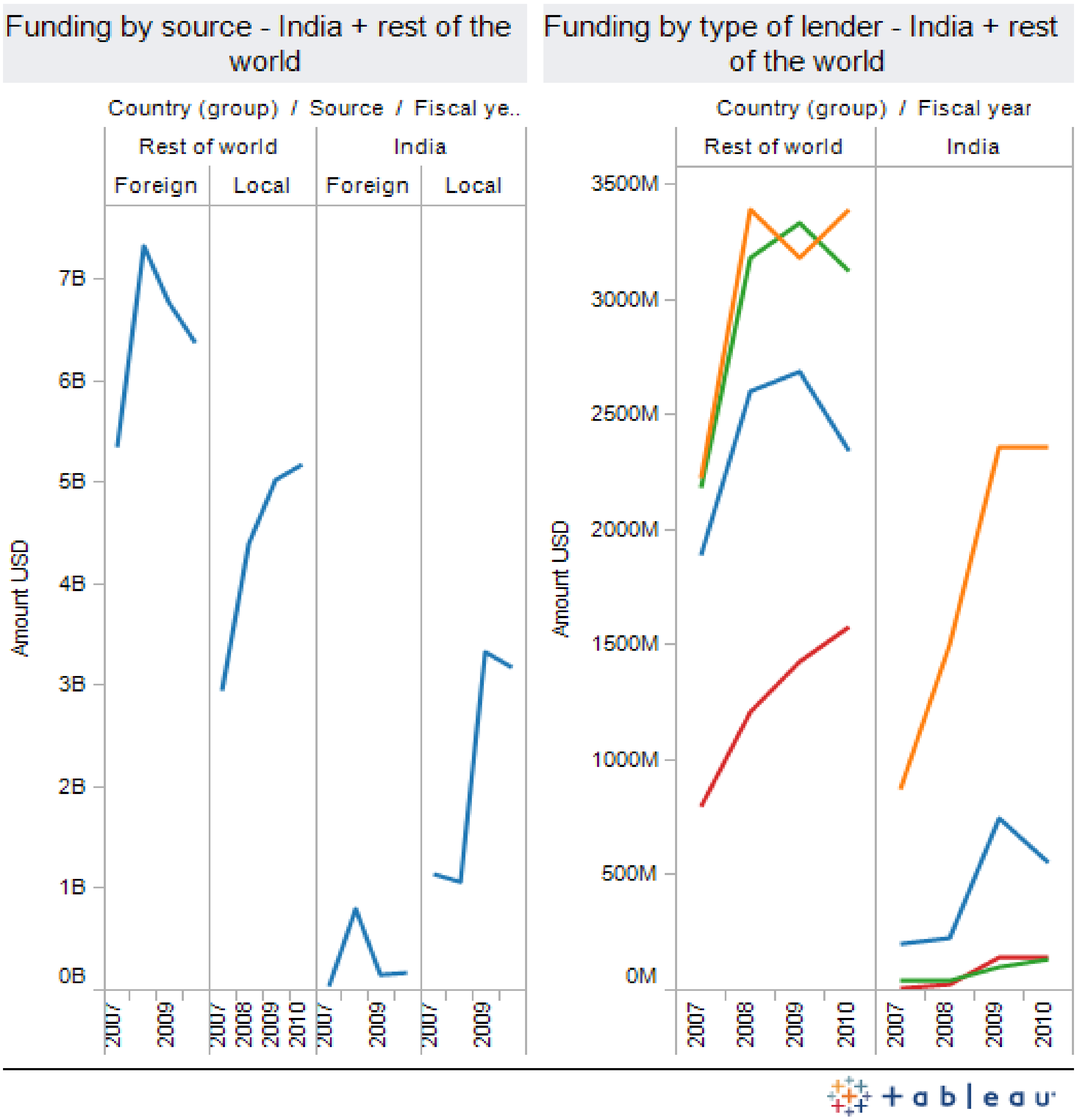
This article explores whether funding to MFIs contributes to over-lending by those MFIs, and whether various measures of funding activity might serve as early warning signals for microfinance crises.

**Funding supply and portfolio quality**

Microfinance institutions have three main sources of funds: debt, equity and deposits. For the purposes of this article, we will focus primarily on debt financing (borrowings). We have detailed information through 2010 on the sources of roughly 15 billion USD in debt, an increase of 5.5 billion USD from 2007 levels.

**Figure 1** below shows the global growth in funding by type of lender and source of funds. Due to the overwhelming size of the Indian market, we graph India separately from the rest of the world. By 2010, local sources (primarily banks) provided the majority of funding - most notably in India. After peaking at 3.2 billion USD in 2009, investment funds represent the second largest source of debt funding, followed by DFIs. The decline in 2010 in foreign sources was the result of the drop in MFI activity following the global financial crisis of 2008/2009.

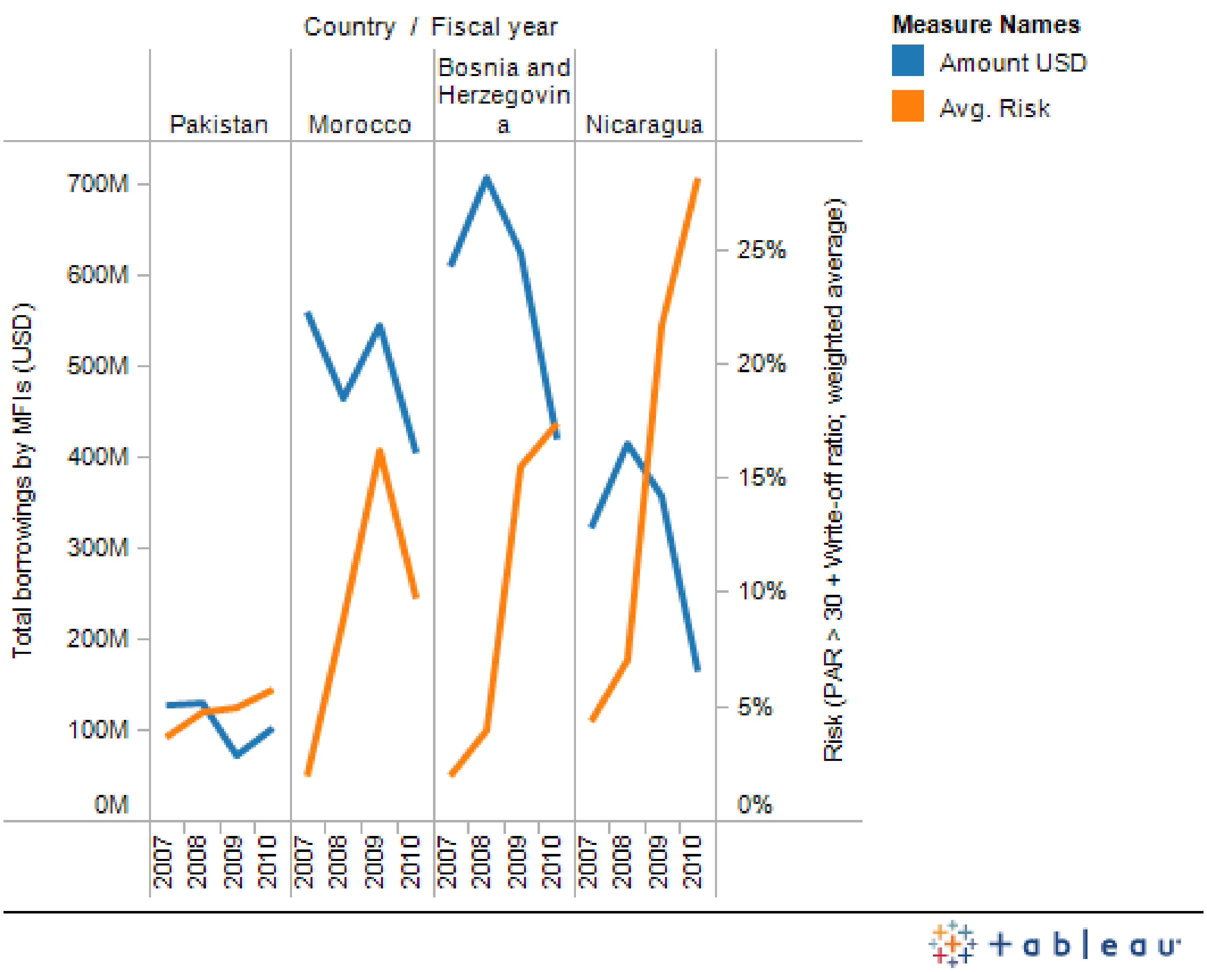
**Figure 1: Sources of funds and types of lenders**




For the four countries cited earlier, figure 2 suggests that portfolio quality began to decline following rapid increases in funding. By 2007, portfolio-at-risk (PAR > 30) levels in these four countries began to deteriorate, with delinquency rates rising from between 1 and 3 percent to 7 to 13 percent in just two years.

In several cases, delinquency problems continued to rise even after funders reduced their exposures. In Nicaragua, the government's explicit support of the grassroots repayment moratorium contributed to a steep and persistent increase in delinquencies notwithstanding the equally steep withdrawal of foreign funding sources.

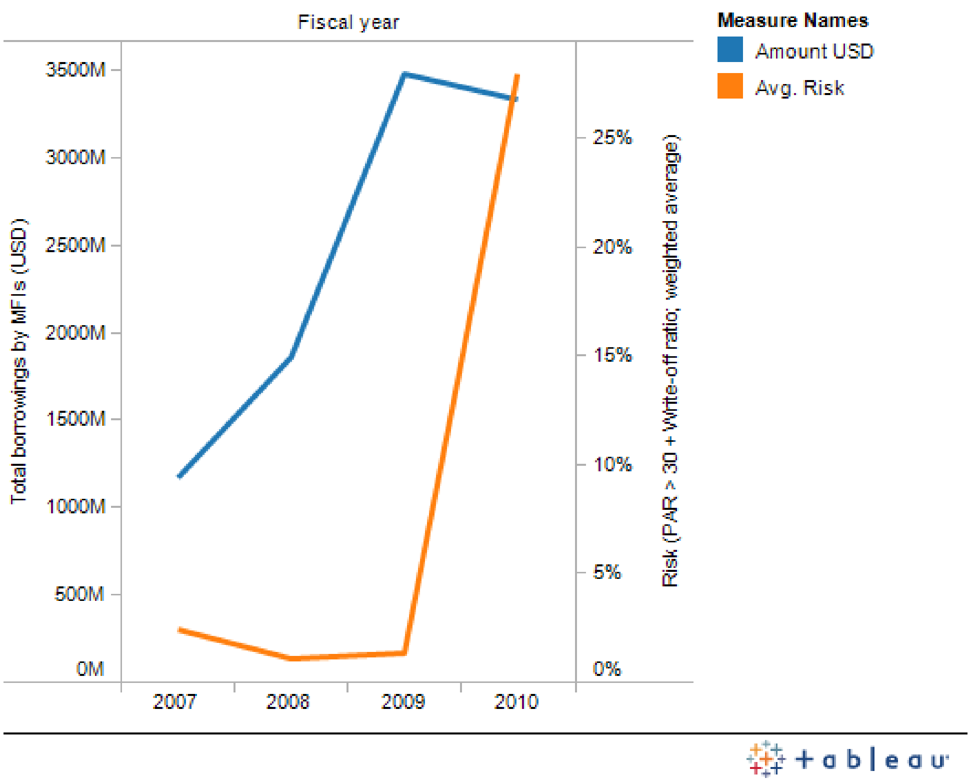
**Figure 2: Growth and risk through major crises**




The most dramatic and thoroughly-documented crisis, however, is the one playing out in India. The evolution of that crisis suggests that excessively fast growth in lending, combined with intense competition and market saturation can lead to a relaxation of credit standards and a strain on MFI systems and practices. **Figure 3** displays the rapid increase in the supply of debt funding, particularly from domestic banks, although growth from equity investors has been similarly rapid.

This suggests that, at the aggregate country level, there may be a relationship between rapidly increasing funding to the sector and declining portfolio quality. We now look at funding at the MFI level to see if there are patterns of activity that could contribute to an early-warning picture of an overheating environment.

**Figure 3: Growth and risk in India**




## Success and unintended consequences

In the same way that individuals can over-borrow, can competition among funding sources to MFIs encourage MFIs to push the limits of their underwriting and risk management processes?

In the past, one of the main constraints to unbridled loan growth was the relative scarcity of funding sources. But in recent years, the business success of microfinance has attracted new and abundant sources of both local and international funding, making it much easier for MFIs to pursue faster growth strategies.

Under these circumstances, MFIs may be encouraged to increase loan portfolios to meet ambitious outreach goals or shareholder demands for increasing revenue growth. Boards may expect the MFI to increase or at least maintain market share when facing increased competition. These competitive pressures can foster aggressive loan origination policies and staff incentives based on loan volume. These will simultaneously contribute to declining portfolio quality and hastening of the market saturation process.

At the same time, the funders' credit standards may limit the number of MFIs that they consider qualified as borrowers. This can lead to the concentration of large volumes of funding on a small number of leading MFIs in a particular location. Current informal information sharing among certain MFI funders is inadequate.

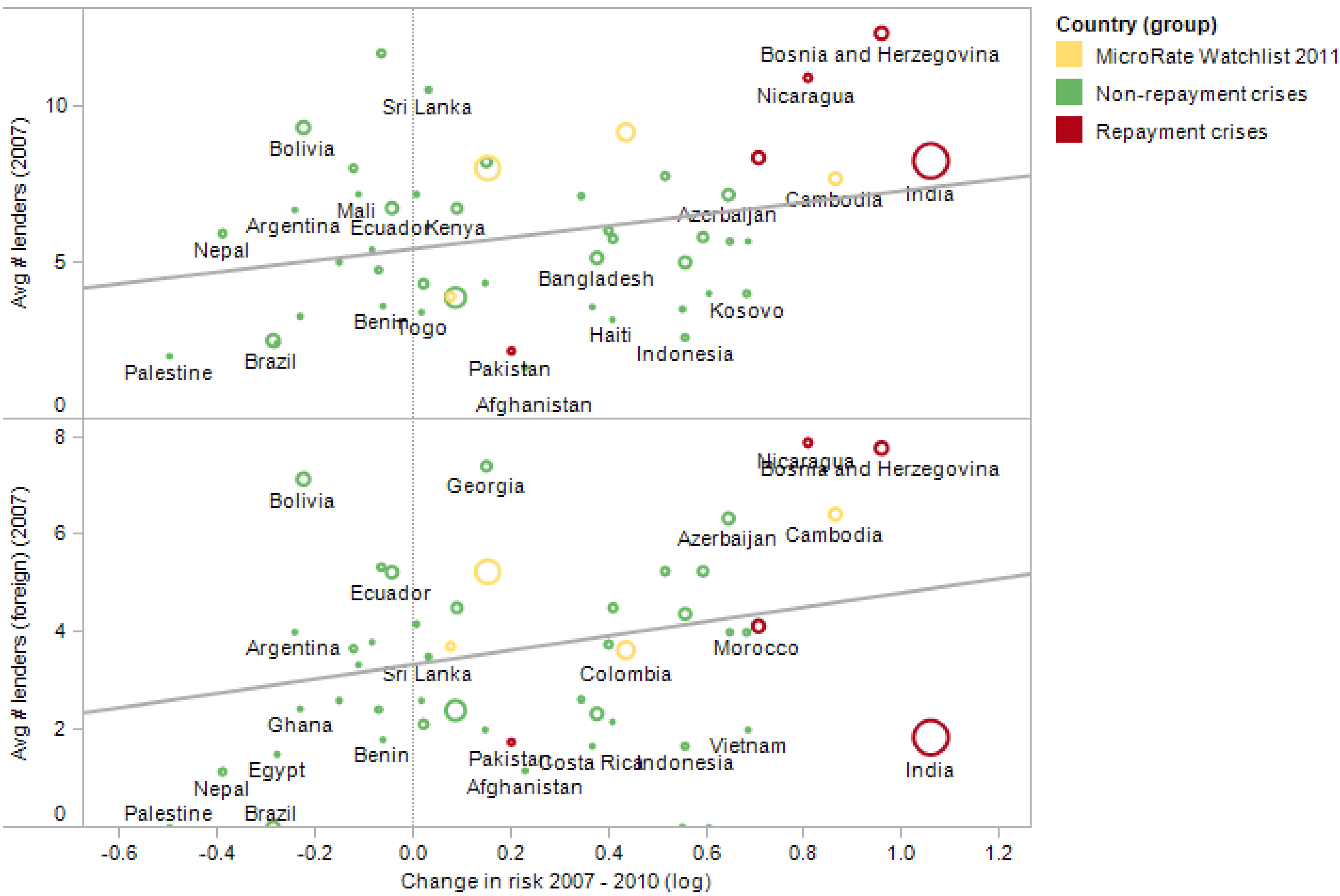
The situation is further affected by the time and resources required for MFIs to reports to multiple funders and stakeholders. Survey results from Africa (a region with generally *low* external investment) indicate the typical MFI there spends roughly 60 days a year solely on reporting to investors and other stakeholders. While credit bureaus may provide information on MFI client borrowing, they will not shed light on aggregate borrowing at the MFI level. In this vein, David Roodman has recently called for such a [public credit bureau](#) to track lending to microcreditors.

Absent such a resource, are there any data that can provide an early indication of increasing multiple borrowing by MFIs and is it correlated to declining loan quality?

**Multiple lender indicators**

**Figure 4** compares the number of distinct lenders per MFI in 2007 with changes in country risk indicators in that country for the period 2007 - 2010.

**Figure 4: Number of lenders in 2007 vs. changes in risk 2007 - 2010**

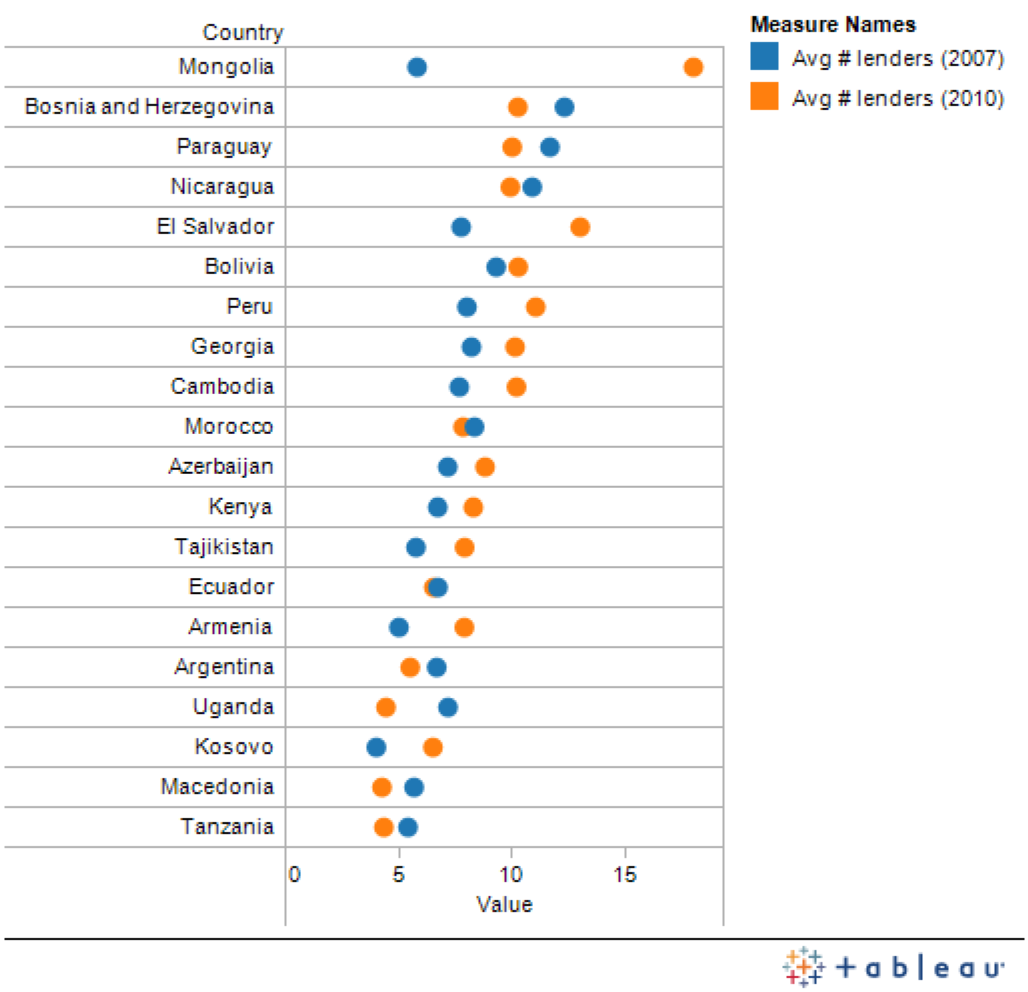



*Note: For this chart, for each MFI, we count the number of distinct lenders. If a lender has multiple loans to the same MFI, we count the lender only once. We then take the average number of distinct lenders across all MFIs by country. For the risk indicator, we take the weighted average of both PAR over 30 days and write-offs by country and compute the log change in risk levels from 2007 - 2010. We use the log of risk levels to better reflect the relative change within a given market. Risk data available [here](#). We include only countries with at least 3 MFIs receiving debt financing in 2007 and 2010. Correlations are significant at the 1% level; data for the charts can be extracted by clicking the extract icon.*

The data shows a reasonable correlation between higher numbers of lenders and increased systemic risk: in general, countries that had more lenders providing debt financing to MFIs in 2007 saw increasing risk over the next four years. The upper-right quadrant of the graph especially highlights markets that have seen crises or the threat of crises in recent times: India, Bosnia, Nicaragua, Morocco. (You can highlight individual countries by mousing over the graph. The first chart shows all sources of funds, while the second shows only the number of cross-border lenders.)

Another way to look at this relationship is to rank individual countries by the average number of lenders per MFI. **Figure 5** lists the countries with the highest number of active lenders per MFI in 2007. Again, countries such as India, Nicaragua, Morocco and Bosnia appeared at the upper end of this range in 2007, further suggesting that this kind of data may be another potentially useful early indicator of increasing market risk.

**Figure 5: Markets with the most lenders on average, 2007 and 2010**




For the 2010 figures, we can track countries that have moved into the range that the crisis countries occupied in 2007. A number of them are **"watchlist" countries** (e.g. Peru, Kyrgyzstan, Cambodia and Colombia) identified by several MIV managers in MicroRate's recent "State of Microfinance Investment" survey.

**Figure 6:** **Average number of lenders for groups of microfinance markets**

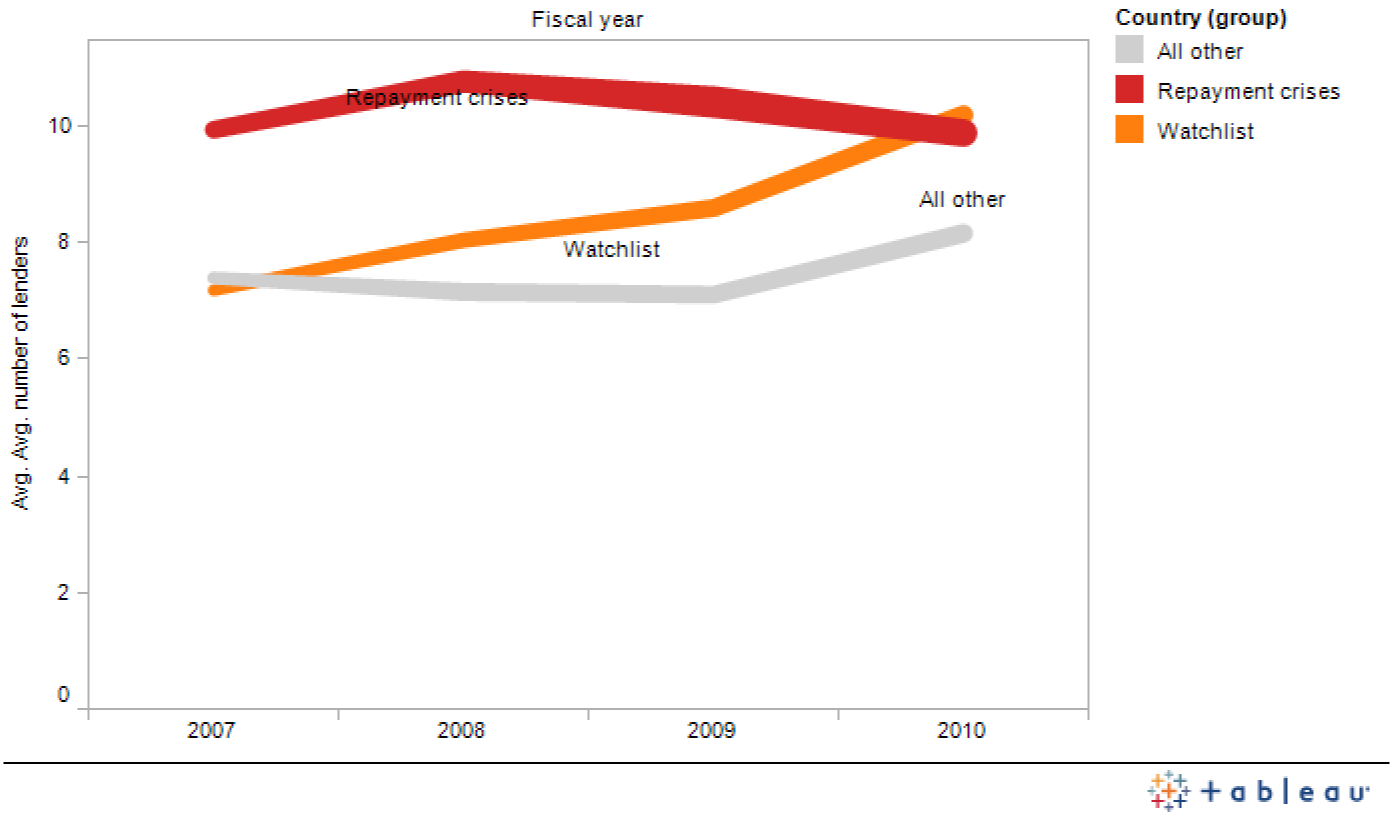



**Figure 6** demonstrates the transition of these groups of countries from 2007 to 2010 - we group countries that have had repayment crises, countries on investor 'watchlists' and those with no crises to date. Those that have experienced a crisis have seen a reduction in the number of borrowing relationships, while the 'watchlist' countries have seen a steady increase in the average number of lenders per MFI during that period. We can track portfolio quality in these markets going forward to see if it follows the same deterioration as in the earlier 'crisis' countries.

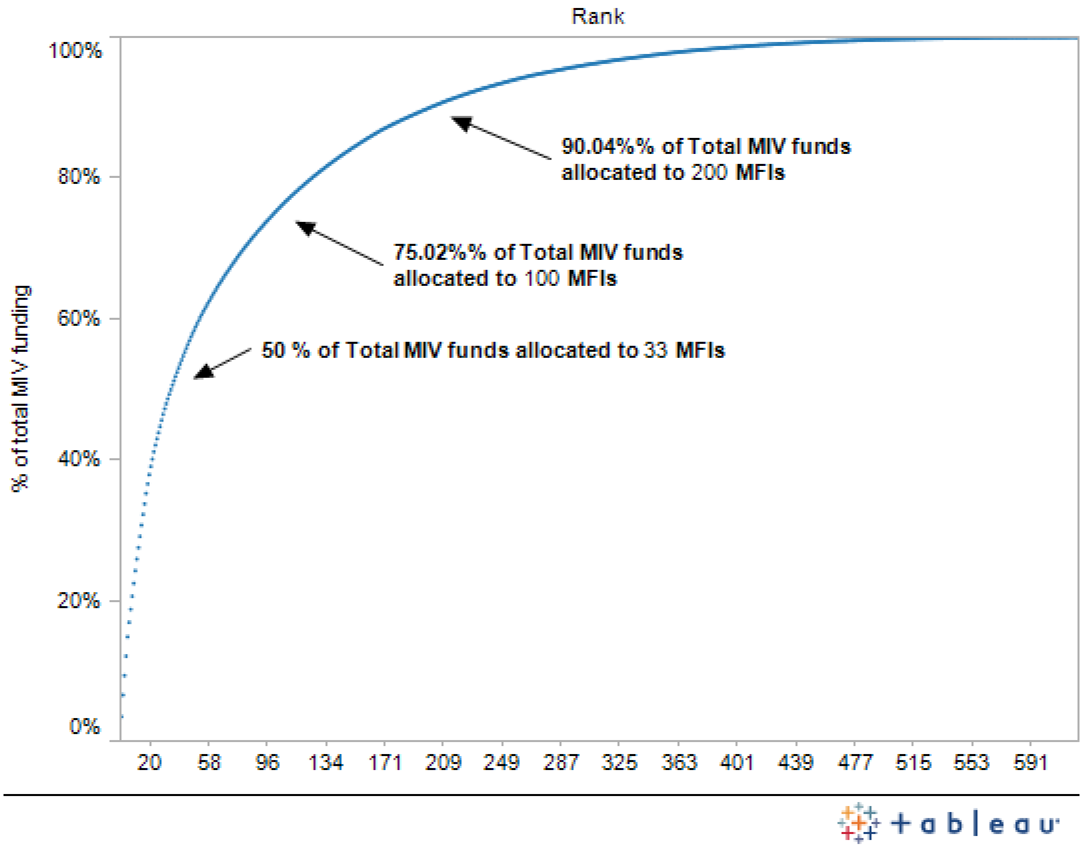
### Favored market concentration

We have seen that MFI activity can sometimes gravitate towards preferred territories within a country, which reach saturation more quickly than the rest of the country, such as the southern states of India. Aggregate funding patterns may thus mask localized areas of emerging problems. Thus, it is important that future analysis also consider data that look at possible intra-country clusters of “over-serviced” locations.

Local concentration can be aggravated by credit considerations of funders that limit their lending to a limited number of institutions within the country, leading to potential oversupply in the areas covered by those few MFIs. **Figure 7** indicates considerable concentration of MIV funding among the top MFIs. Fifty percent of total MIV funding (almost 5 billion USD) is concentrated in 33 MFIs. The top 100 MFIs receive seventy-five percent of the funding, while 90 percent of funding goes to the top 200 MFIs - the remaining 10 percent is allocated to an additional 400 MFIs around the world.

A fuller analysis of concentration at the country level is beyond the scope of this article but would be an important contribution to a more detailed understanding of leading indicators of overheating market conditions.

**Figure 7: Concentration of MIV funding by MFI, 2010**




## Conclusion

Microcredit markets are fragile. The poor have limited absorptive capacity for debt and can easily overextend themselves by taking on debt obligations in excess of what they can reasonably hope to service. While ambitious MFI outreach goals are to be applauded in principle, the reality is that overly zealous loan origination activities can override governance and control systems, leading to less rigorous credit standards and destructive, unintended consequences.

While the best deterrent to over-indebtedness will come from improved credit reporting systems at the individual and institutional level, the data presented here suggests that we can find warnings for these problems by tracking the supply of credit to microfinance institutions. Those microfinance markets with the most lenders and most competition for MFI clients have seen the highest increases in risk, and likely, client over-indebtedness.