

Information Sharing as a Way to Overcome Information Asymmetries in Microfinance Markets

BA Thesis in Banking and Finance

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Executive Summary

Relevance of Information Sharing

The present thesis analyzes how information sharing can help microfinance institutions and their (potential) borrowers to overcome the problem of information asymmetry. It is divided into a theoretical and an empirical section, with the latter discussing, among other things, how information is shared in Brazil and Peru.

Owing to adverse selection and moral hazard, microfinance institutions cannot distinguish between good and bad borrowers. The inability to differentiate between a good and a bad borrower leads to an information gap. If this information gap is not overcome, lenders might ration credits (Stiglitz and Weiss, 1981) and extract informational rents (Jappelli and Pagano, 2000), while borrowers might apply for multiple credits without the knowledge of the lenders (McIntosh et al., 2006).

To overcome such exemplary problems resulting from information asymmetry, microfinance institutions (principals) need to align the interests of their borrowers (agents) with their own interests. As Ledgerwood (1999) observes, microfinance institutions can, for example, ask for physical collateral, frequent loan payments, compulsory savings, guarantees, or even threat their borrowers with public embarrassment and legal action to make sure every borrower is fully motivated to pay back their credit.

Another option of non-physical collateral is information sharing via a credit bureau or a credit registry. Lenders can share data on a borrower's default history (black information), or even exchange default data (black information), along with information about the characteristics of a borrower (white information) with other lenders (Ledgerwood et al., 2013). By so doing, lenders create incentives for borrowers to put in enough effort to improve the probability of a successful investment. A successful investment enables borrowers to pay back their loans. In case a borrower defaults, they are likely to be excluded from future credit (Armendáriz de Aghion and Morduch, 2005). However, information sharing not only puts pressure on borrowers to pay back their loans but also eliminates the informational rents of lenders (Jappelli and Pagano, 2000). Failing to receive the lowest possible interest rate, a borrower can threaten to borrow from another lender. As a result, lenders face a trade-off. They need to

decide whether they want to share any information, such as only black information, which presupposes some information asymmetry, or black and white information, which theoretically eliminates any information asymmetry.

Theoretical Results

This thesis focuses on the five following, theoretical models about information sharing:

- The model of Padilla and Pagano (2000) discusses the ideal behavior of two profit-maximizing banks, concluding that a bank should share black and white information about a predetermined percentage of random borrowers with its competitor. Borrowers would not put in enough effort if white information was fully disclosed. However, if only black information was disclosed, borrowers would exert too much effort.
- It can be concluded from the model of Pagano and Jappelli (1993) that profit-maximizing lenders should adapt their information-sharing behavior depending on a number of factors (see the respective chapter). If, however, the number of borrowers could be maximized, lenders should exchange both black and white information.
- The model of Vercammen (1995) suggests that profit-maximizing lenders share black information. The information should be deleted after some time, for example, by a credit bureau or a credit registry. This deletion will ensure an ideal level of effort on the part of the borrowers.
- The model of McIntosh and Wydick (2005) recommends client-maximizing microfinance institutions share black and white data without any restrictions.
- Jain and Mansuri (2005) suggest that volume-maximizing microfinance institutions share black information.

Please note that no model advises against information sharing.

Empirical Results

The empirical findings of this thesis are mostly based on cross-country studies. For example, several studies find that the sharing of black and white information is the ideal way to exchange information since this may improve the access to credit (Triki and Gajigo, 2012), reduce the portfolio arrears rate of microfinance institutions (Luoto et al., 2007), and allow lenders to better estimate the credit capacity of potential borrowers (GTZ (ed.), 2001).

As mentioned earlier, the thesis gives a detailed overview of the information sharing systems prevalent in Brazil and Peru. According to Miller (2003), Brazilian lenders traditionally prefer sharing black information only. Peruvian lenders, on the other hand, tend to share both black and white information (Valdivia and Bauchet, 2005). Despite the seemingly better information quality in Peru, Brazilian credit bureaus and registries cover a bigger percentage of all adults in the country than their Peruvian counterparts (World Bank, 17.5.2013). Since the quality of data appears to be better in Peru whereas the quantity of data seems to be better in Brazil, one cannot simply conclude in which country microfinance institutions benefit more from sharing information. For this reason, the gross loan portfolios (GPLs) and the number of borrowers of Brazilian and Peruvian microfinance institutions are compared. According to MIX (9.6.2013), the gross loan portfolio and the number of borrowers of Peruvian microfinance providers grew faster than their Brazilian counterparts. Therefore, it appears that the quality of the shared data has a bigger impact on microfinance than the quantity of the exchanged data (assuming the two countries are similar in all aspects except for their sharing policies and credit coverage).

Final Remarks

Even though the findings and results of this thesis are unambiguous most of the time, it is to be noted that the suggestions of the respective models need to be applied carefully since these models are based on simplistic assumptions which might not be realistic. Moreover, some models were constructed for a general, rather than a particular, microfinance credit market, which might reduce their applicability.

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