UNIVERSITY OF ZÜRICH
DEPARTMENT OF BANKING & FINANCE
CENTER FOR MICROFINANCE

MASTER'S THESIS BY JACKIE BAUER

DETERMINANTS OF MFI PORTFOLIO QUALITY

AN EMPIRICAL ANALYSIS OF MICRO & MACRO INDICATORS

Supervisor: Prof. Dr. Urs Birchler

Assistant: Dr. Annette Krauss

Author: Jacqueline Bauer

Submission Date: 29.07.2013

EXECUTIVE SUMMARY

Microfinance Institutions (MFIs) provide financial services to the "under-banked" people in society, particularly in developing countries. The microfinance industry has seen unprecedented growth in the past, partly due to the global action to eradicate poverty. It has written many success stories but also faced considerable challenges. The future is bright but sustainability of an inherently risky business – loans to clients with low collateral – is a necessity.

It is an economic convention that the seed of growth is investment. Microfinance has reached the point where the seed needs more water to grow, more investment from various sources. Microfinance investors are generally interested in sustainable and socially responsible investments. After global financial and microfinance specific crises investors specifically but all stakeholders more broadly ask for more reliable indicators to measure the degree of quality of the institution they want to engage with.

Much work has been done in the area of MFI performance assessments and measurements with a focus on institutional sustainability, profitability, mission-conformity, outreach and poverty reduction. For the MFIs themselves being able to assess their performance in various ways helps to stay mission focused and achieve long-term viability. Our attention is not on performance in general but specifically on the quality of the microfinance portfolio to increase transparency and measurability. While many authors mention portfolio quality in their performance studies, they fail to qualify and quantify their choice of ratios to assess it. Moreover, the existing literature often treats portfolio quality as just another performance indicator.

We discuss various possible measures and existing theory and find that any ratio measuring portfolio quality should consider the MFI's ability to collect loan repayments on time. Preferably it should capture this ability as early as possible, so that the MFI has some room to take action as well. Therefore, the measure has to indicate potential risk of not recollecting the loan rather than actual inability to recollect it. The most widely used measure to describe portfolio quality in the existing literature is PAR30 and we identify it as the best portfolio quality proxy.

Our empirical analysis relies on data from two different sources. The micro-level data is taken from the MIX Market database. This is one of the most expansive and detailed sources for microfinance institutional data and also a widely used tool for academic analysis. Its database includes approximately 2000 MFIs operating globally, covering roughly 80% of all microfinance clients. The macro-level data are taken from the World Bank's "World Development Indicators". Our data specific issues – small time (years) and large panel variable (MFIs) among others – call for the use of an estimator developed by Arellano and Bond (1991). It is a GMM method that is specifically designed to deal with models, which include lagged regressors of the dependent

variable, possibly endogenous independent variables, individual fixed effects as well as heteroscedasticity and autocorrelation within panels.

Based on our analysis we come to the conclusion that portfolio quality is determined by various factors. PAR30 is statistically significantly driven by its own past trend, size of the gross loan portfolio and how it grows, operational self-sufficiency, loss provisioning and the write-off policy, the amount of female borrowers and the degree of loan monitoring on the micro side. The macro side indicates FDI, inflation rate, the labor force participation rate and the depth of the financial system as important. For a positive effect all these factors have to be strategically reconciled with each other, MFIs should harmonize growth, lending and write-off policy. This in turn, needs to be aligned with the target market, the lender-borrower relation and in general put in context with a sustainable long-term strategy. Therefore, MFIs focusing on high portfolio quality signals a sustainable long-term attitude towards stakeholders, whether these are clients interested to borrow from a healthy institution, donors who want to make sure their funds are used for the intended purpose or investors wanting a return on their investment.

While various sub-regressions confirm the robustness of our results we have to acknowledge some limitations of this paper. They arise form the data we use in terms of reliability and availability but also from the analysis, which is not able to capture all intended effects. Many issues need to be addressed in the future. Additional variables, different methods, a greater time horizon are some of them. Moreover, one of our most important findings was that quality is indeed a long-term issue and that deterioration or improvement effects are felt over a prolonged period. Therefore, one might set out to determine the exact length of time this effect can be felt. We are looking forward to seeing different approaches.