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***Governance and Performance of Microfinance
Institutions in Central and Eastern Europe
And the Newly Independent States***

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Governance and Performance of Microfinance Institutions in Central and Eastern Europe and the Newly Independent States

Abstract: This paper presents the first evidence on the impact of external governance mechanisms, board diversity and independence, and management compensation on outreach and sustainability of microfinance institutions in Central and Eastern Europe and the Newly Independent States. Results indicate that among external governance mechanisms only auditing affects outreach, whereas regulation and rating do not affect performance. Board diversity improves both outreach and sustainability while larger and less independent boards lower sustainability. Performance-based compensation is not effective in aligning the interest of managers and stakeholders, and underpaying managers reduces outreach.

Governance and Performance of Microfinance Institutions in Central and Eastern Europe and the Newly Independent States

Microfinance is the provision of loans and other financial services to the poor. The *microfinance institution* (MFI) has evolved as a result of the efforts of committed individuals and assistance agencies to reduce poverty by promoting self-employment and entrepreneurship. The MFI faces unique challenges because it must achieve a double bottom line—provide financial services to the poor (*outreach*) and cover its costs (*sustainability*). Microfinance is a significant and growing industry, yet there are no studies that explore the link between governance and performance. Previous studies have focused mainly on the role of innovative lending practices for improving outreach and sustainability, and on the impact that MFIs have on borrowers (Morduch, 1999; Aghion and Morduch, 2000).

Microfinance practitioners have recognized that good governance is critical for the success of the MFIs (Campion, 1998; Rock, Otero and Saltzman, 1998) but only few studies on regulations in microfinance have touched upon governance issues (McGuire, 1999). Closer examination of the role of various governance mechanisms is important because MFI managers control significant resources. In Central and Eastern Europe and the Newly Independent States (CEE & the NIS) the asset base of these organizations is estimated to be 1.2 billion dollars (Foster, Green, and Pytkowska, 2003). The recent waves of corporate scandals in developed countries indicate that there is much room for improvement of governance practices even in countries with well-functioning markets and in industries with established mechanisms of control.

There are several reasons for the lack of studies on the effect of MFI governance on performance. First, performance data are considered proprietary and are hard to obtain. Although the majority of MFIs are funded with public funds channeled through large international development agencies, until recently the practice was to withhold performance information from the general public.¹ Moreover, there are no market mechanisms that promote transparency as

¹ The industry practice has been to publish performance information aggregated by region, such as the data published by the Microbanking Bulletin. Individual data are also published but only in terms of number of clients, e.g. the data collected and published by the Microcreditsummit.

scrutiny is not in the interest of either donors or MFI managers, and thus governance practices are not very transparent.

Next, the microfinance industry is quite diverse in terms of organizational types, with MFIs organized as non-governmental organizations (NGOs), banks, credit cooperatives or non-bank financial institutions. This diversity complicates the analysis because it makes it difficult to choose appropriate conceptual framework. The literature on governance focuses mainly on problems of the modern public company while the governance issues in banks and in non-profit organizations are much less understood and empirical studies of these organizational types are rare. However, a 1998 industry survey shows that there are few differences in the objectives and performance of MFIs organized under different legal forms. Therefore, an empirical approach built on theoretical predictions relevant to MFIs could be used to identify the impact of various governance mechanisms.

This paper uses unique data from recently conducted surveys in Central and Eastern Europe and in the Newly Independent States to study the relationships between governance and MFI performance. Results indicate that governance mechanisms impact outreach and sustainability differently. External governance mechanisms play a limited role as only audit improves breadth of outreach. After controlling for institutional, MFI-specific, and economic factors, external governance mechanisms do not impact sustainability. The board is an effective internal governance mechanism and MFIs with local boards have higher sustainability. Board diversity improves both outreach and sustainability. The pursuit of both outreach and sustainability, it seems, may create difficulties for stakeholders who, by being represented on the board, hope to protect their interest. For example, results show that donor representatives improve depth of outreach but worsen breadth of outreach and sustainability. On the other hand, as expected, financiers promote sustainability. Consistent with other studies on board size and independence, this paper finds that in microfinance larger boards and boards with higher proportion of insiders have worse financial results. Results also indicate that performance-based compensation is not effective in aligning the interest of managers with that of other stakeholders and underpaying managers lowers outreach.

The rest of the paper is organized as follows. Part 2 presents theoretical considerations and the empirical model, part 3 briefly describes the data, part 4 discusses the results and part 5 offers conclusions.

Theoretical Considerations and Empirical Specifications

In microfinance, governance refers to the mechanisms through which donors, equity investors and other providers of funds ensure themselves that their funds will be used according to the intended purposes.² Such control mechanisms are necessary because managers and providers of funds may have diverging preferences and objectives. For example, MFI managers may work towards fulfilling the mission of the MFI but they may also have preferences for non-pecuniary rewards. In the corporate governance literature, this problem is known as the agency problem. This literature refers to the manager as an Agent, who unlike the Principal, does not own the resources of the firm. The Principal owns the resources and bears the residual risk, that is, the Principal is the residual claimant of the firm's wealth (Jensen and Meckling, 1976). Costs associated with the agency problem are called agency costs and represent costs that residual claimants bear in order to benefit from the professional services of managers. The goal of many governance mechanisms is to minimize agency costs by aligning the objectives of the owner-Principal with the objectives of the manager-Agent.

The key mechanisms of an effective governance framework are ownership (including institutional and managerial ownership), board and board structure (size and composition), CEO (manager) and director (board member) remuneration, auditing, information, and the market for corporate control (Keasey, Thompson & Write, 1997). This paper explores all mechanisms besides ownership, because the database used does not contain data on ownership.

MFIs have some unique characteristics that complicate the study of their governance. For example, they need to fulfill an outreach mission by serving poor clients, and many operate as NGOs, which makes them similar to non-profit firms. Many MFIs are similar to banks because they are regulated or supervised by a regulatory body and/or because they collect deposits. The organizational diversity of MFIs makes the empirical study of their governance difficult. This challenge is addressed by specifying several empirical models based on insights from the corporate governance literature, from the literature on governance in banks and from the literature on governance in non-profit organizations.

² This definition is based on the definition by Shleifer and Vishny (1997) where corporate governance is defined as the mechanism through which shareholders (providers of funds) ensure themselves that they will receive maximum return on their investments.

Since MFIs strive to achieve outreach and sustainability, some governance mechanisms may impact mainly outreach and some may affect mainly sustainability depending on whose rights these mechanisms are supposed to protect. For example, donors may prefer outreach to sustainability, while private investors prefer sustainability to outreach. These two stakeholders (a group of people with similar interests in the organization) may install their representatives on the board and influence the direction of manager's effort. The empirical analysis addresses this challenge by estimating the impact of each governance mechanisms on both sustainability and outreach.

External Governance Mechanisms

The manager of a corporation is disciplined by market forces, through the market for managers and through the market for takeovers. These market forces have a limited role in microfinance because the market for MFI managers is thin and because most MFIs do not have true owners. As the microfinance industry grows and matures, however, other market forces have started to play important roles in promoting manager accountability.

Competition for donations and customers, as well as the presence of for-profit firms affects the behavior of non-profit firms and that of MFIs. As they strive for survival, these firms may change their ideological perspective and mission if this would bring more donor money (Rose-Akerman, 1986). Indeed, until recently information on the performance of individual MFIs was scant. With the increase in competition for donor funds and clients, MFIs and their managers are becoming more transparent.

For example, many MFIs have their financial statement audited and certified by external auditors. Auditing can be an effective external mechanism because it signals to potential investors and donors that the manager complied with the accounting practices and did not misrepresent financial information. In addition, there is empirical evidence that firms' demand for quality auditors is driven by active stakeholders (Ashbaugh and Warfield, 2004). Therefore, we expect a positive relationship between audited financial statements and MFI performance. In some countries or under some circumstances (organizational forms, size, and regulatory status) auditing may be obligatory. Therefore, it is important to include proper control variables that will capture these differences.

The competition for donor and investor funds has contributed to the appearance of MFI rating agencies, which serve as another external mechanism of control.³ The evidence on the effectiveness of rating agencies is somewhat mixed (Partnoy, 1999). Moreover, agencies that rate MFIs differ from agencies that rate debt instruments of corporations because the former rate the overall performance of the MFI and not only the riskiness of issued debt. Managers of MFIs use ratings to signal their quality to future providers of funds. This suggests a positive relationship between rating and MFI performance. However, some authors have argued that rating may lead to *moral hazard*—once the MFI is rated, and funds are secured, managers do not have incentives to exercise maximum effort and may slack off (Mukhopadhyay, 2003).

Regulation and supervision by a government agency also serves as an external governance mechanism for many MFIs, especially for those who accept deposits. Deposit-taking institutions have additional stakeholders. First, depositors become Principals because they own part of the resources used by the MFI. Second, if deposits are insured by the government, then taxpayers have a stake in the organizations because taxpayers would foot the bill if the deposit-taking organization fails. From an efficient governance standpoint, Dewatripont and Tirole (1993) show that depositors should act as “bad-times” principals, while equity holders should act as “good-times” principals, but since depositors are dispersed, an external agency should be involved when (ex-post) efficiency requires interventions. That is, for organizations that collect deposits, regulation is an efficient control mechanism.

Regulation could affect the performance of MFIs because it may shift the emphasis away from both outreach and sustainability. This could happen because regulators promote less-risky behavior by the manager in order to preserve the safety of the MFI itself, and more broadly the safety of the financial system. Less risk-taking, however, is equivalent to lower returns and may be against the preferences of donors and others who fund microfinance institutions with the hope that these institutions would serve more risky clients (the poor) and still earn profits.

Founders of microfinance institutions would like to make sure that new MFIs have adequate control mechanisms. That is why the external mechanisms of control could be

³ In the law literature, Manne (1999) proposes a similar solution for NGO governance, namely that an external, for-profit company (which is disciplined by market forces) serves as a monitoring mechanism. NGOs will contract with it to be monitored in terms of the charitable and financial aspects of their operations. However, according to Manne, these private organizations should not just be raters; rather they should have the right to sue NGOs to rectify violations.

complemented by an internal mechanism of control, namely the MFI board. The expectation is that MFIs that have a board perform better than MFIs that do not.

Based on these theoretical considerations, the empirical model is:

$$Performance_{i,t} = \alpha_1 + \beta_1 Supervised_{i,t} + \beta_2 Rated_{i,t} + \beta_3 Audited_{i,t} + \beta_4 Have_Board_{i,t} + \sum_{j=1}^m \beta_j Controls_{i,t,j} + \varepsilon_{i,t} \quad (1)$$

where *Performance* is measured by outreach and profitability indicators for MFI *i* at year *t*; *Supervised* is a dummy for supervision/regulation by a government agency; *Rated* is a variable that indicates whether the MFI was rated at *t*; *Audited* is a dummy for having an audited financial statement in year *t*, and *Have_Board* is a dummy for the effect of the internal governance mechanism.

Numerous cross-country studies find that local market and institutional factors affect significantly the performance of financial intermediaries and that these factors need to be included in the empirical analysis (Barth, *et al.*, 2003; Caprio, Laeven & Levine, 2003). Therefore, the empirical model includes *Controls*, which is a vector of variables that account for differences in the MFIs, in the national economy, and for level of development of various institutions within each country.⁴

The last element $\varepsilon_{i,t}$ is an error term. The model is estimated as a random effect model using the GLS method.

The MFI board

Boards are important in microfinance because of the relatively limited role of external market forces. The board of directors is an internal governance mechanism that helps resolve the agency problems between owners and managers. Corporate boards are elected by shareholders to monitor and advise managers. The degree of alignment of board and shareholder objectives is measured in the empirical corporate governance literature by the proportion of outside/independent directors on the board. More independent directors (non-employees, not related to the company) are expected to act as better monitors and advisors. Empirical studies

⁴ Detailed description of the control variables is in the Data section.

have found both positive and negative relationships between the proportion of outside directors and firm value (review of the literature in Hermalin and Weisbach, 2003).

Non-profit boards are typically comprised of outsiders, so the role of insiders versus outsiders is normally not considered.⁵ In this sample, the typical board consists of about 10 percent voting insiders and that is why we estimate a model that accounts for the role of insiders, outsiders and implicitly for the role of “gray directors.”⁶

In the boardroom, the major conflict is between the manager, who has incentives to capture the board and thus ensure his job and non-pecuniary benefits, and the directors (board members) who have incentives to maintain their independence to monitor and, if necessary, replace the manager. Directors are paid, and the market for their services should ensure diligent monitoring (Fama and Jensen, 1983a) although corporate directors may also have considerable incentives to slack off or get along with managers (Holmstrom, 1999).

In a non-profit organization, the absence of residual claimants avoids the donor-residual claimant agency problems (Fama and Jensen (1983a). Internal agents (managers and employees) will still desire to expropriate donations, but the non-profit board allows for separation of management from control. Although board members of non-profit firms are rarely paid, they do provide continuous personal time and/or wealth, and would want to do a good job on the board. Board members no longer committed to the mission leave, and substitution is done by the remaining board members based on mutually agreed upon criteria (Fama and Jensen, 1983b).

Since some MFIs are subject to regulation, they may share some of the specific characteristics of boards in regulated industries. For example, boards in banking have a larger proportion of outside directors than boards of firms in manufacturing (Adams and Mehran, 2003).

Board efficacy can be influenced by board size, with larger boards being less effective than smaller boards because when the board gets too big, free riding by some directors may become an issue (Jensen, 1993; Lipton and Lorch, 1992). This hypothesis is confirmed by studies on both large corporate boards and boards of small firms (Yermack, 1996; Eisenber Sungren and Wells, 1998). In non-profit firms, monitoring by the board declines with firm size,

⁵ Callen and Falk (1993) have defined insiders as board members who receive pay, but because pay is atypical in nonprofit boards, this measure is not very useful. Independence is also measured by the power of the CEO to nominate the board and to vote on board selection (Shivdasani and Yermack, 1999; Oster and O’Reagan, 2002).

⁶ The term *gray* board member is used to describe board members who are not employee of the MFI but are involved in some of the MFI activity.

although fundraising increases with size (Oster and O'Reagan, 2003). Banks, however, have larger boards than firms in other industries (Adams and Mehran, 2003).

To study the role of board size and board independence the following model is estimated:

$$Performance_{i,t} = \alpha_1 + \beta_1 Bsize_{i,t} + \beta_2 Insiders_{i,t} + \beta_3 Non-affiliated Outsiders_{i,t} + \sum_{j=1}^m \beta_j Controls_{i,t,j} + \varepsilon_{i,t} \quad (2)$$

where *Bsize* is the size of the board, *Insiders* is the proportion of employees who are voting board members (usually the manager), *Non-affiliated Outsiders* is the proportion of non-affiliated board members, *Controls* is a vector of variables that control for various qualities of institutions, economic conditions and MFI-specific characteristics such a size and age.

Research has also focused on how board diversity affects firm performance. There is evidence that women directors spend more time on monitoring activities. The occupation of board members does not affect time spent on monitoring, but it affects fundraising (Oster and O'Reagan, 2003). Corporate performance is also affected by board diversity. Corporations with higher proportions of women and ethnic minorities perform better, according to a recent study of the largest Fortune 1000 companies (Carter, Simkins and Simpson, 2003).

The MFI board has unique characteristics. It is not unusual for several major stakeholders to be represented on the board. The major stakeholders in an MFI are donors, equity investors, insiders (employees and managers), and creditors (who often provide a significant amount of the funding available for microloans). Some MFIs have included clients on their boards (Campion, 1998). The relative power of these various stakeholders affects outreach and sustainability.

To study how board diversification affects MFI performance, the following equation is estimated:

$$Performance_{i,t} = \alpha_1 + \beta_1 Bsize_{i,t} + \beta_2 Women Directors_{i,t} + \beta_3 Donors_{i,t} + \beta_4 Financiers_{i,t} + \beta_5 Local Businessmen_{i,t} + \beta_6 Clients_{i,t} + \beta_7 Other_{i,t} + \sum_{j=1}^m \beta_j Controls_{i,t,j} + \varepsilon_{i,t} \quad (3)$$

where *Women Directors* is the proportion of women on the board, *Donors* is the proportion of donors, *Financiers* is the proportion of members with financial skills, *Clients* is the proportion of clients, and *Others* is the proportion of other professions and characteristics. *Controls* here is the vector of control variables described earlier.

Managerial Compensation as an Incentive-Aligning Mechanism

According to the agency literature, compensation that includes both a performance-based element and a fixed element is the best mechanism to align the interests of managers with that of equity holders and donors. Indeed, performance-related bonuses are used in the microfinance industry. The empirical literature on corporations confirms that there is a nonlinear pay-performance link, but the sensitivity is relatively small; in their widely cited study Jensen and Murphy (1990) find that, for large corporations, pay-performance sensitivity is only \$3.25 for every \$1,000 increase in shareholder value. Recent papers show that this sensitivity has been increasing (Murphy, 1999).

Banks are regulated industries and regulation may substitute for or complement incentive features in managerial contracts (John, Mehran, and Qian, 2004). High-powered incentives (remuneration where the bonus part is significant) may align the interests of managers too much with those of equity holders, and induce managers to take higher risks at the expense of depositors, who would suffer most if the MFI fails. For the US bank industries, John, Saunders and Senbet (2000) have argued that regulation that takes into account the top management salary may be more effective than capital regulation in ameliorating risk-shifting incentives. In banks, the higher leverage (use of deposits) requires that the manager's interest are not aligned too much with the interest of equity holders; thus low pay-performance sensitivity is recommended (John and John, 1993). Indeed, pay-performance sensitivity in banking has been smaller than that in other industries (Houston and James, 1995; John and Qian, 2003; Adams and Mehran, 2003).

In non-profits, many forms of incentive pay are illegal. In fact, it has been shown that the asymmetric information between clients and managers (that is, managers know more about the product than clients) makes fixed salaries the better choice for non-profit managers (Easley and O'Hara, 1986). Specifically, since managers get fixed salaries, they are indifferent between telling the truth and lying, and thus will tell the truth. Clients and donors will find the

information provided by non-profit managers more credible and this will lead to better funded and better performing firms.

Instead of offering performance-based compensation as agency theory would suggest, non-profits boards may be able to recruit managers by offering compensation packages combining lower wages with some perquisites that only individuals committed to the mission will self-select to take (Handy and Katz, 1998). Additionally, the appeal of a position of power in non-profit firms may be sufficient to attract good managers (James, 1983). It has been shown that if wages paid to NGO managers are similar to those paid to for-profit managers, and if the NGO technology is superior to that of the for-profit firm, the NGOs will dominate the industry (Scott and Hopkins, 1999)⁷

To evaluate the role of managerial compensation on MFI performance the following empirical model is used:

$$Performance_{i,t} = \alpha_1 + \beta_1 Higher\ Wage_{i,t} + \beta_2 Lower\ Wage_{i,t} + \beta_3 Fixed\ Wage_{i,t} + \beta_4 Experience_{i,t} + \sum_{j=1}^m \beta_j Controls_{i,t,j} + \epsilon_{i,t} \quad (4)$$

where *Performance* includes indicators for outreach and sustainability, *Higher Wage* is a dummy that takes the value of one if the manager stated that his salary is higher than what he could get at an alternative job, *Lower Wage* is a dummy that takes the value of one if the manager stated that his salary is lower than what he could get at an alternative job, *Fixed Wages* is a dummy for fixed pay, namely a wage not based on performance, *Experience* is the number of years of experience (usually used to proxy a manager's quality), and *Controls* is a vector of controls described earlier.

⁷ Donors fund both for-profit and non-profit MFIs and this paper models exactly a situation where donors fund both NGOs and for-profit firms in the first period and only the efficient organizations in the second period. As the microfinance industry matures, donors are increasingly concerned with efficiency and are willing to fund only the efficient MFIs so the prediction that the lending/saving technology, and not staff wages, will determine survival is an important insight. A caveat of this model suggests that wages could even be lower if personnel are very committed to the MFI mission.

The Data

Data for this study came from three surveys. The first survey was conducted in 1998 by the regional network organization, the Microfinance Center for Central and Eastern Europe and the Newly Independent States (MFC for CEE and the NIS). The survey collected data on MFI governance and performance. The second survey was conducted in 2001 by the same regional network. In this survey, MFIs reported their performance, organizational and product characteristics for the period 1998-2001. Since 2000, many MFIs have been sending annual reports to the MFC for CEE and the NIS and their initial profiles were updated for 2002 by this organization's staff. The third survey focused specifically on governance and was conducted in 2002 by the author in cooperation with the MFC for CEE and the NIS. The data on MFI performance, board characteristics and mechanisms of external control were used to develop the database.

The microfinance industry is new in Central and Eastern Europe and the Newly Independent States and not all MFIs had a board in place at the time the survey was conducted. In fact, in 2001, of the 140 organizations (including credit unions and cooperatives) that participated in the survey only 71 had a board. These 71 MFIs were contacted in 2002 and asked to complete a second survey with detailed questions on governance. The response rate was nearly 50% as 34 organizations completed the survey.

Credit unions and cooperatives (24 organizations) were excluded from the database because they have distinctively different governance.⁸ The resulting sample size is even smaller since many MFIs turned in incomplete surveys, or reported performance for only one year and their information could not be used in panel data analysis. Sample size also varies across performance measures because many MFIs reported only a few performance indicators. The staff of the Microfinance Center collected and added additional performance measures to the database.

Variables used in the regression analysis are defined in Table 1. In microfinance, performance is measured in terms of outreach and sustainability. Sustainability is measured by accounting-based indicators. In general, accounting measures are considered more appropriate for long-term studies because managers may be able to manipulate financial statements for a year but their ability to manipulate statements for longer periods is limited (Bhagat and Jefferis,

⁸ The most distinctive feature is the rule "one person, one vote," which changes the decision making process.

2002). In this analysis sustainability is measured by return on assets (ROA), and by operational self-sustainability (OSS). Operational self-sufficiency measures how well the MFI can cover its costs through operating revenues. It is a better measure in this context because ROA is self-reported and does not necessarily include the value of donations, in-kind subsidies and inflation that MFIs should be incorporating in this ratio.

Outreach, in turn, is measured in two dimensions—breadth and depth. Breadth of outreach is measured by the logarithm of the number of active borrowers; that is, borrowers who currently have a loan. Depth of outreach is measured by a variable *DEPTH*, which is the average loan size divided by the annual GDP per capita, all in US dollars.⁹ Smaller value of this variable is proffered because smaller values indicate that poorer people are being served. Conversely, higher values of *DEPTH* indicate that wealthier clients are being served. Therefore, from a poverty-alleviation perspective, a negative impact on *DEPTH* is preferred because it indicates that this variable improves the depth of outreach by helping serve poorer people.

Table 2 presents the summary statistics of the variables used in the regression analysis. The values are the averages for all applicable years. Numerous control variables are used to account for the differences in MFIs and in the conditions in which they operate. Data on individual characteristics include MFI size measured as the logarithm of total assets, MFI age in years, and MFI type—NGO, Non-bank Financial Institution, and Bank which is the omitted dummy in the regression analysis.

Differences in economic conditions across countries are controlled for by the size of the economy (*Economy Size*) measured by logarithm of GDP and by the average inflation rate (*Inflation*) measured by the average consumer price index. Differences in institutional development across countries are captured by three indexes computed by the EBRD. These indexes approximate the level of banking sector reform (*BSR*), regulations that promote competition (*CP*), and infrastructure reform (*IR*). The first index captures the level of regulation of MFIs and their competitors. The last two indexes affect clients. If clients operate in a repressive environment, with poor infrastructure and in a regulatory environment that stifles competition, then such clients will be more difficult to serve in a profitable manner, holding constant the effort of managers and board members.

⁹ GDP per capita data were obtained from the European Bank for Reconstruction and Development (EBRD).

Discussion of the Results

Results in Table 3 indicate that external governance mechanisms are not effective. Supervision by central banking authorities does not affect either sustainability (measured by the OSS ratio) or outreach (measured by the number of active clients).¹⁰ This result is consistent with previous empirical studies which found that governments should not rely exclusively on direct regulation of banking activities to promote bank efficiency (Barth, Caprio, and Levine, 2004). Rating by an independent agency does not have an effect on any of the performance measures. This is an important result because MFIs have been spending significant resources to be rated.¹¹ Among all external governance mechanisms only auditing affects outreach and its magnitude is significant—holding all other factors fixed, MFIs with audited financial statement reach 100 percent more borrowers.

The MFI board is an important governance mechanism. Holding all other factors fixed, MFIs with a local board have on average 52 percentage points higher OSS than MFIs without a local board. A more detailed investigation of the MFI board is, therefore, justified not only by the theory but also by the data for Central and Eastern Europe and the Newly Independent States.

Results on the effect of board size and board independence on MFI profitability and outreach are interesting. Agency theory suggests that board independence influences MFI performance positively. Indeed, in Table 4 the coefficient on the proportion of insiders on the board is negative for all the performance measures but it is statistically significant only when performance is measured by ROA. On average replacing one director with an insider lowers ROA by 6.6 percentage points.¹²

The specification for OSS in Table 4 also shows results consistent with the literature that finds a negative relationship between board size and financial results. Holding all other factors fixed, one additional board member lowers OSS by 10 percentage points.

Board diversity matters in Central and Eastern Europe and the Newly Independent States (Table 5). Boards with higher proportions of women on the board reach more and poorer

¹⁰ Table 3 does not show the estimates on the effect of external governance mechanisms on *ROA* and *DEPTH* because an F test failed to reject the hypothesis that the independent variables are jointly significant. In addition, the coefficients on the external governance factors were not significant in these regressions.

¹¹ It should be noted, however, that the data are from the 1998-2001 period. While some rating agencies like ACCION's CAMEL operated earlier, rating was not popular.

¹² Replacing one board member refers to replacing one board member of a type not affecting performance with a type affecting performance. The calculation is based on 0.17 increase in the proportion of the relevant board member which is about one person on a board consisting of 6 board members (the average value for the sample).

borrowers, and have higher returns on assets. Specifically, replacing one board member with a woman would help reach 48 percent more borrowers, improve ROA by 3.5 percentage points and lower the index of outreach by 57 percentage points (equivalent to serving poorer borrowers). Replacing one board member with a donor would help the MFI serve poorer clients (the index of depth of outreach would fall 35 percentage points) but it would also lead to fewer borrowers (by 35 percent), and lower levels of OSS (by 25 percentage points). Donors' emphasis on serving poorer borrowers may be diverting attention from sustainability. Furthermore, the ability of donor representatives to raise funds may bring in easy money, and thus lower incentives to achieve high level of OSS. As expected, board members with banking and financial skills improve sustainability (replacement of a board member with a financier improves ROA by 4.25 percentage points and OSS by 17 percentage points) without affecting outreach. Somewhat surprisingly, local businesses representatives on the board do not affect sustainability but improve breadth of outreach (one replacement with such a board member by 42 percent), which indicates that this category may include "useful board members."

Results concerning the role of clients on the board are interesting. This category of board members affects sustainability positively (OSS would be improved by 27 percentage points for a replacement with a client), but this would be at the expense of depth, as clients-board members seem to be pushing for serving wealthier borrowers (one replacement by a client would increase the index of depth of outreach by 80 percentage points).

As suggested by the literature on non-profit firms, incentives that align the interest of managers with the interests of stakeholders work differently in microfinance. MFI performance is not affected by the type of wage; that is, it does not matter whether managers are paid a fixed wage, or fixed wage plus a performance-based bonus (Table 6). What matters is that managers are adequately compensated, as lower wages affect outreach negatively. Everything else equal, an underpaid manager reaches 2.4 times less borrowers than a manager who is adequately or overcompensated. Wages higher than those in alternative employment do not lead to significant improvements in outreach and sustainability, but this specific result should be regarded with caution because answers to questions on income are notoriously unreliable. More experienced managers seem to be interested in lending to poorer borrowers, but the magnitude of this effect is small—10 extra years of experience would lower the index of depth of outreach by only 35 percentage points.

The empirical analysis shows that economic, institutional and MFI specific factors should be taken into consideration when evaluating the performance of MFIs and their managers. Size of the economy impacts positively outreach and sustainability, while high inflation harms both. Banking sector reform influences sustainability negatively but improves depth of outreach, perhaps because competition from other banks forces MFIs to serve poorer clients. Infrastructure reform improves both outreach and sustainability, as it decreases costs to MFIs and their clients. Improvement in competition policy impacts depth by making wealthier borrower more attractive. Everything else equal, NGOs and non-bank financial institutions have about 200 percentage points better depth of outreach; that is, these institutions serve significantly poorer borrowers.

Conclusion

This paper studies how governance mechanisms affect performance of MFIs in Central and Eastern Europe and the Newly Independent States. Using insights from the corporate governance literature, the literature on non-profit boards and the literature on boards of banks, the paper examines the impact of external mechanisms of control, management remuneration, and board independence and diversity, while holding constant institutional, macroeconomic and MFI-specific factors. Not all known governance mechanisms affect performance and moreover, different factors affect outreach and sustainability.

External governance mechanisms, specifically supervision by regulatory authority and rating by independent agency, are not effective mechanisms of control. Only auditing has a positive effect on outreach. Internal governance mechanisms, particularly the board matter, as MFIs with local boards achieve better sustainability. Consistent with other studies on board size and independence, this paper finds that in microfinance larger boards and boards with higher proportion of insiders have worse financial results.

Policies to promote board diversity seem appropriate. The presence of women on the board improves depth and breadth of outreach as well as sustainability. Somewhat surprisingly, local businessmen on the board do not affect sustainability but improve breadth of outreach while members with diverse skills (the category “other”) improve sustainability. The pursuit of both outreach and sustainability, it seems, may create difficulties for stakeholders who, by being represented on the board, hope to protect their interest. For example, results show that donor

representatives improve depth of outreach but worsen breadth of outreach and sustainability. On the other hand, as expected, financiers promote sustainability.

The analysis sheds light on an important question: “Should MFI clients be allowed on the board?” Advocates have argued that clients are stakeholders because their welfare is affected by the performance of the organization, and therefore clients should be represented on the board. Results here show that having clients as board members improves sustainability at the expense of depth of outreach; that is, at the cost of shifting the focus toward serving richer borrowers.

This study finds that traditional mechanisms designed to align the interests of managers with those of other stakeholders have a limited role in microfinance. Performance-based compensation of managers does not improve MFI performance. However, offering lower salary so that only managers committed to the mission would take the job (as suggested by the NGO literature) is ineffective because MFIs with underpaid managers achieve less outreach. Finally, manager experience does not affect sustainability and its impact on depth of outreach is small in magnitude.

This paper presents the first evidence on the link between governance mechanisms and performance in microfinance. Clearly, while some traditional governance mechanisms seem to work, more comprehensive data collection and more research is needed to better understand how various governance mechanisms affect the performance of microfinance institutions.

Table 1. Definition of Variables

<i>Variable</i>	<i>Definition</i>
<i>ROA</i>	Return on assets; measures how well the MFI uses its total assets to generate returns; since self-reported may not be adjusted for grants and donations
<i>OSS</i>	Operational self-sufficiency = Operating revenue / (Financial expense + Loan Loss Provision + Operating Expense). Measures how well the MFI can cover its costs through operating revenues.
<i>Log (No. active borrowers)</i>	Logarithm of the number of current borrowers, that is the number of individuals that currently have an outstanding loan balance with the MFI or are responsible for repaying any portion of the gross loan portfolio
<i>DEPTH</i>	Average outstanding loans size / GDP per capita in \$US. Higher values mean that the MFI serves richer borrowers
<i>MFI age</i>	Number of years since inception
<i>Log(Total Assets)</i>	Logarithm of the total assets of the MFI. Total assets include all assets net of contra asset accounts such as the loan loss reserve and accumulated depreciation.
<i>Supervised Rated</i>	A dummy that equals one if the MFI is regulated/supervised by a government regulatory agency and zero otherwise
<i>Audited</i>	A dummy that equals one if the MFI is rated by a specialized MFI rating agency and zero otherwise
<i>Insiders</i>	A dummy that equals one if the financial statement of the MFI is audited and zero otherwise
<i>Independent</i>	The proportion of voting board members that are also employees of the MFI
<i>Board Size</i>	The proportion of board members who do not have an affiliation with any of the stakeholders of the MFI
<i>Fixed Wage</i>	Number of board members
<i>Higher Wage</i>	A dummy that equals one if the manager receives a fixed salary, zero otherwise
<i>Lower Wage</i>	A dummy that equals one if the manager estimated that he is paid more than what he could get at a similar job
<i>Women</i>	A dummy that equals one if the manager estimated that he is paid less than what he could get at a similar job
<i>Donor</i>	The proportion of women on the board
<i>Financiers</i>	The proportion of board members who represent donors or grant-giving organization
<i>Local Businessmen</i>	The proportion of board members with financial skills
<i>Clients</i>	The proportion of board members who are local businessmen
<i>Other</i>	The proportion of clients on the board
<i>Experience</i>	The proportion of other representatives; excludes government representatives and community leaders.
<i>Economy size</i>	The number of years of experience of the manager
<i>Inflation</i>	Logarithm of the total GDP (gross domestic product of the country) for year t
<i>IR</i>	Average annualized consumer price index
<i>BSR</i>	Index of infrastructure reform; higher values indicate better infrastructure, varies from 1 to 6
<i>CP</i>	Index of the banking sector reform; varies from 1 to 6; higher values indicate higher level of development
<i>NGO</i>	Index of competition policies: higher values indicate better policies, varies from 1 to 6.
<i>Non-Bank FI</i>	The MFI is an NGO, and zero otherwise
	The MFI is a non-bank financial institution, and zero otherwise

Table 2: Summary Statistics

<i>Variable</i>	No. of observations	Mean	Std. Dev.
<i>ROA (%)</i>	166	3.038	29.290
<i>OSS (%)</i>	215	91.990	45.380
<i>No. Active Borrowers</i>	380	7,268	64,943
<i>DEPTH (%)</i>	327	425	134
<i>Total Assets (\$ thousands)</i>	189	6,437	26,935
<i>Supervised</i>	380	0.368	0.483
<i>Audited</i>	380	0.745	0.437
<i>Rated</i>	325	0.262	0.440
<i>Have_Board</i>	435	0.773	0.420
<i>Bsize</i>	268	6.09	2.258
<i>Women</i>	258	0.232	0.230
<i>Donor</i>	259	0.183	0.301
<i>Financiers</i>	258	0.209	0.274
<i>Local Businessmen</i>	258	0.127	0.177
<i>Clients</i>	259	0.040	0.138
<i>Others</i>	258	0.036	0.140
<i>Insider</i>	141	0.115	0.187
<i>Independent</i>	138	0.582	0.332
<i>Meetings</i>	138	4.971	2.991
<i>Higher Wage</i>	170	0.118	0.323
<i>Lower Wage</i>	170	0.324	0.469
<i>Fixed Wage</i>	138	0.768	0.424
<i>Experience</i>	170	14.338	7.718
<i>LogTa</i>	193	13.913	1.910
<i>MFI age</i>	380	2.881	1.859
<i>Economy Size</i>	380	23.182	1.435
<i>Inflation</i>	380	0.181	0.301
<i>IR</i>	380	1.971	0.530
<i>BSR</i>	380	2.206	0.602
<i>CP</i>	380	1.865	0.623
<i>NGO</i>	380	0.659	0.475
<i>Non-bank FI</i>	380	0.087	0.283

Table 3: Random effect estimates of the impact of external mechanisms of control

	<i>OSS</i>	<i>logNab</i>
<i>Constant</i>	36.974 (0.27)	1.665 (0.57)
<i>Supervised</i>	-15.822 (0.80)	-0.343 (0.80)
<i>Audited</i>	16.999 (1.12)	1.044*** (3.10)
<i>Rated</i>	10.968 (0.58)	0.498 (1.27)
<i>Have_Board</i>	52.622** (2.42)	-0.362 (0.77)
<i>Controls</i>		
<i>logTa</i>	0.344 (0.14)	0.217*** (3.83)
<i>MFI age</i>	4.149 (1.17)	0.223*** (2.93)
<i>Economy Size</i>	0.171 (0.03)	0.055 (0.44)
<i>Inflation</i>	-85.432 (1.27)	-2.799* (1.88)
<i>IR</i>	38.942** (2.54)	0.903** (2.55)
<i>BSR</i>	-42.635** (2.00)	-0.712 (1.50)
<i>NGO</i>	2.365 (0.08)	0.170 (0.28)
<i>Non-bank FI</i>	12.6238 (0.37)	0.247 (0.37)
<i>R-squared(overall)</i>	0.27	0.52
<i>Observations</i>	96 ¹	180
<i>Number of MFIs</i>	38 ²	60

Absolute value of z statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

¹ Includes total number of observations for all MFIs (except credit unions) for all available years up to 2001. The number of observations varies across measures of performance because of incomplete performance data.

² Number of groups with at least 2 complete observations per year.

Dependent variable measuring sustainability is operational-self sustainability (OSS), defined as $\text{Operating revenue} / (\text{Financial expense} + \text{Loan Loss Provision} + \text{Operating Expense})$. It measures how well the MFI can cover its costs through operating revenues. Dependent variable measuring breadth of outreach is log of the number of total borrowers (*logNab*). *Supervised* is a dummy variable that indicates whether the MFI is supervised by a government agency; *Audited* is a dummy variable that indicated whether the MFI had audited financial statements for the year; *Rated* is a dummy variable that equals one if the MFIs was rated. Control variables for MFI-specific factors are log of the dollar value (in thousands) of total assets (*logTa*), MFI age in years, *NGO*, and *Non-Bank FI*; control variables for the impact of economic factors are *Economy Size*, measured as log of the country GDP in US\$; *Inflation* measured by as average *CPI* (expressed in percentage). Control variables for institutional characteristics are EBRD index of infrastructure reform (*IR*), and EBRD index of banking sector reform (*BSR*).

Table 4: Random effect estimates of the impact of board independence

	<i>ROA</i> ¹	<i>OSS</i> ¹	<i>logNab</i> ¹	<i>DEPTH</i> ¹
<i>Constant</i>	-110.846 (1.21)	63.126 (0.25)	5.363 (0.60)	194.822 (0.43)
<i>Bsize</i>	1.170 (0.72)	-9.852** (2.36)	-0.078 (0.49)	0.798 (0.10)
<i>Insider</i>	-39.774* (1.66)	-115.559 (1.55)	-2.731 (1.18)	-39.352 (0.34)
<i>Independent</i>	4.915 (0.42)	31.259 (0.98)	0.937 (0.83)	-65.408 (1.16)
<i>Controls</i>				
<i>LogTa</i>	-0.376 (0.56)	0.198 (0.09)	0.056 (0.91)	-0.619 (0.20)
<i>MFI age</i>	0.358 (0.25)	3.303 (1.06)	0.174* (1.76)	3.098 (0.62)
<i>Economy Size</i>	8.286 (1.61)	9.074 (0.65)	-0.020 (0.04)	36.256 (1.55)
<i>Inflation</i>	-9.110 (0.27)	-214.949** (2.24)	-7.811*** (3.08)	120.042 (0.96)
<i>IR</i>	16.778*** (3.52)	50.698*** (3.84)	1.412*** (3.47)	-18.128 (0.88)
<i>BSR</i>	-55.404*** (3.69)	-100.475** (2.48)	-1.557 (1.41)	- (2.81)
<i>CP</i>	7.897 (1.34)	10.679 (0.61)	0.065 (0.13)	160.421 (0.67)
<i>NGO</i>	9.900 (0.89)	-12.871 (0.26)	1.993* (1.66)	- (3.15)
<i>Non-bank FI</i>	5.096 (0.44)	-80296 (0.16)	2.042 (1.61)	-164.891** (2.49)
<i>R-squared (overall)</i>	0.54	0.55	0.55	0.58
<i>Observations</i>	56 ²	65	75	71
<i>Number of MFIs</i>	22 ³	23	26	25

Absolute value of z statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

¹ The sample includes only MFIs with a board.

² Includes total number of observations from the 2002 governance survey. The number of observations varies across measures of performance because of incomplete performance data.

³ Number of groups with at least 2 complete observations per year.

Dependent variables measuring sustainability are return on assets (*ROA*) and operational-self sustainability ($OSS = \text{Operating revenue}/(\text{Financial expense} + \text{Loan Loss Provision} + \text{Operating Expense})$), which measures how well the MFI can cover its costs through operating revenues. Dependent variables for outreach are log of the number of total borrowers (*logNab*), which measures breadth of outreach, and *DEPTH* ($DEPTH = \text{Average Loan Size}/\text{GDP per capita}$), which measures whether poorer/richer borrowers are being served. Higher values of *DEPTH* are less desirable and indicate that richer borrowers are being served. *Bsize* is the number of board members; *Insider* is the proportion of board members who are also employees of the MFI; and *Independent* is the proportion of independent board members. MFI-specific control are log of the dollar value (in thousands) of total assets (*logTa*), MFI age in years, *NGO*, and *Non-Bank FI*; control variables for the impact of economic factors are *Economy Size*, measured as log of the country GDP in US\$; *Inflation* measured as average *CPI*. Control variables for institutional characteristics are EBRD index of infrastructure reform (*IR*), EBRD index of banking sector reform (BSR), and EBRD index of competition policy (*CP*).

Table 6: Random effect estimates of the impact of board diversity

	ROA^i	OSS^i	$\log Nab^i$	$DEPTH^i$
<i>Constant</i>	48.125 (0.89)	1.589 (1.00)	-2.109 (0.50)	1661.233*** (5.17)
<i>Bsize</i>	-2.650* (1.79)	-0.083 (0.02)	0.125 (1.22)	-4.574 (0.57)
<i>Women</i>	21.028* (1.69)	-19.576 (0.52)	2.335** (2.30)	-341.124*** (4.30)
<i>Donor</i>	-23.588 (1.60)	-115.698** (2.21)	-2.072* (1.70)	-218.956** (2.36)
<i>Financiers</i>	24.973* (1.73)	107.476** (2.36)	0.410 (0.35)	137.657 (1.55)
<i>Local Businessmen</i>	14.629 (1.14)	19.475 (0.52)	2.060** (2.13)	94.438 (1.17)
<i>Client</i>	18.956 (0.88)	160.007** (2.44)	-1.055 (0.74)	471.853*** (4.38)
<i>Others</i>	43.132*** (3.12)	46.169 (1.09)	-0.602 (0.51)	7.742 (0.03)
<i>Controls</i>				
<i>LogTa</i>	-0.192 (0.23)	0.248 (0.11)	0.129** (2.41)	-5.208 (1.16)
<i>MFI age</i>	-0.589 (0.38)	2.452 (0.73)	0.209*** (2.72)	-5.104 (0.80)
<i>Economy Size</i>	-3.642 (1.55)	-1.376 (0.19)	0.346* (1.82)	-40.698*** (2.79)
<i>Inflation</i>	-23.013 (0.80)	-121.26* (1.77)	-6.112*** (3.92)	-123.024 (0.94)
<i>IR</i>	17.783*** (3.22)	51.179*** (3.56)	1.292*** (3.73)	5.398 (0.19)
<i>BSR</i>	-11.050 (1.25)	-59.090** (2.48)	-2.031*** (3.69)	-63.420 (1.38)

	<i>ROA</i> ¹	<i>OSS</i> ¹	<i>logNab</i> ¹	<i>DEPTH</i> ¹
<i>CP</i>	4.067 (0.67)	3.283 (0.21)	-0.202 (0.57)	86.475*** (2.91)
<i>NGO</i>	-6.400 (0.58)	-19.035 (0.41)	0.644 (0.72)	-201.347*** (2.99)
<i>Non-bank FI</i>	-10.109 (0.87)	-23.614 (0.50)	-0.037 (0.04)	-58.869 (0.79)
<i>R-squared (overall)</i>	0.46	0.38	0.66	0.60
<i>Observations</i>	81 ¹	92	106	94
<i>Number of MFIs</i>	35 ²	36	41	37

Absolute value of z statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

¹The sample includes only MFIs with a board.

² Includes total number of observations from all applicable questions from the 1998, 2001 and 2002 surveys. The number of observations varies across measures of performance because of incomplete performance data.

³ Number of groups with at least 2 complete observations per year.

Dependent variables measuring sustainability are return on assets (*ROA*) and operational-self sustainability (*OSS* = Operating revenue/(Financial expense + Loan Loss Provision + Operating Expense), which measures how well the MFI can cover its costs through operating revenues. Dependent variables for outreach are log of the number of total borrowers (*logNab*), which measures breadth of outreach, and *DEPTH* (*DEPTH*=Average Loan Size/GDP per capita), which measures whether poorer/richer borrowers are being served. Higher values of *DEPTH* are less desirable and indicate that richer borrowers are being served. *Bsize* is the number of board members. *Women* is the proportion of women on the board, *Donor* is the proportion of donor representatives on the board, *Financiers* is the proportion of members with financial and banking skills, *Local Businessmen* is the proportion of local businessmen on the board, *Clients* is the proportion of clients on the board, and *Others* is the proportion of the category “other.” Control variables for MFI-specific factors are log of the dollar value (in thousands) of total assets (*logTa*), MFI age in years, *NGO*, and *Non-Bank FI*; control variables for the impact of economic factors are *Economy Size*, measured as log of the country GDP in US\$; *Inflation* measured by as average *CPI* (expressed in percentage). Control variables for institutional characteristics are EBRD index of infrastructure reform (*IR*), EBRD index of banking sector reform (*BSR*), and EBRD index of competition policy (*CP*).

Table 7: Random effect estimates of the impact of managerial remuneration

	<i>ROA^t</i>	<i>OSS^t</i>	<i>logNab^t</i>	<i>DEPTH^t</i>
<i>Constant</i>	-95.377 (1.08)	-344.276 (1.53)	2.695 (0.42)	259.444 (0.76)
<i>Higher Wage</i>	10.768 (0.90)	4.941 (0.21)	-0.891 (1.17)	-46.130 (1.11)
<i>Lower Wage</i>	-7.4 (0.92)	-27.337 (1.29)	-2.406*** (3.78)	33.224 (0.92)
<i>Fixed Wage</i>	8.489 (0.98)	27.677 (1.33)	0.658 (0.98)	-2.475 (0.07)
<i>Experience</i>	0.057 (0.13)	0.619 (0.57)	0.021 (0.61)	-3.542* (1.81)
<i>Controls</i>				
<i>LogTa</i>	-0.61 (0.93)	0.138 (0.06)	0.042 (0.73)	0.497 (0.17)
<i>MFI age</i>	-0.81 (0.58)	2.956 (0.89)	0.107 (1.20)	5.389 (1.12)
<i>Economy Size</i>	7.47 (1.47)	27.546** (2.13)	0.064 (0.18)	-35.973* (1.87)
<i>Inflation</i>	-2.442 (0.08)	-213.378** (2.21)	-9.030*** (3.94)	153.426 (1.26)
<i>IR</i>	18.197*** (3.82)	44.572*** (3.20)	1.390*** (3.71)	-20.170 (1.00)
<i>BSR</i>	-48.422*** (3.23)	-122.749*** (3.15)	-1.2 (1.21)	-162.189*** (2.98)
<i>NGO</i>	17.368 (1.56)	-6.890 (0.15)	2.658*** (2.83)	-212.801*** (4.27)
<i>Non-bank FI</i>	8.034 (0.70)	-7.401 (0.16)	2.532*** (2.61)	-223.141*** (4.06)

<i>R-squared (overall)</i>	0.53	0.53	0.55	0.66
<i>Observations</i>	56 ¹	65	75	71
<i>Number of MFIs</i>	22 ²	23	26	25

Absolute value of z statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

¹ The sample includes only MFIs with a board.

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Dependent variables measuring sustainability are return on assets (*ROA*) and operational-self sustainability (*OSS* = Operating revenue/(Financial expense + Loan Loss Provision + Operating Expense), which measures how well the MFI can cover its costs through operating revenues. Dependent variables for outreach are log of the number of total borrowers (*logNab*), which measures breadth of outreach, and *DEPTH* (Average Loan Size/GDP per capita), which measures whether poorer/richer borrowers are being served. Higher values of *DEPTH* are less desirable and indicate that richer borrowers are being served. *Bsize* is the number of *Higher Wage* is a dummy that takes the value of one if the manager has indicated that he received salary higher than his alternative employment, *Lower Wage* is a dummy that takes the value of one if the manager has indicated that he received salary lower than his alternative employment, *Fixed Wage* is a dummy variable that takes the value of one if the manager is compensated with fixed salary. *Experience* is the number of years of managers' experience. Control variables for MFI-specific factors are log of the dollar value (in thousands) of total assets (*logTa*), MFI age in years, *NGO*, and *Non-Bank FI*; control variables for the impact of economic factors are *Economy Size*, measured as log of the country GDP in US\$, *Inflation* measured by as average *CPI* (expressed in percentage). Control variables for institutional characteristics are EBRD index of infrastructure reform (*IR*), and EBRD index of banking sector reform (*BSR*).

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