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# Financial performance and corporate governance in microfinance: Evidence from Asia<sup>☆</sup>



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### ABSTRACT

Good corporate governance is considered a building block of success for microfinance institutions (MFIs) as it is presumed to help them in achieving their social and financial goals. This paper analyzes the corporate governance and financial performance relationship for MFIs in Asia. We make use of a panel dataset involving 173 MFIs in 18 Asian countries for the period 2007–2011. We construct a corporate governance index based on seven measures pertaining to board size and composition, CEO characteristics, and ownership type. We then estimate the two-way relationship between this index and each of five different financial performance indicators. To address the likely simultaneity between corporate governance and financial performance, we adopt a two-stage least squares estimation approach with instrumental variables. Our results confirm the endogenous nature of corporate governance and financial performance. We conclude that profitability and sustainability of MFIs improve with good governance practices and conversely that more profitable and sustainable MFIs have better governance systems.

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## 1. Introduction

Poverty is a major problem in many developing countries and many efforts are being made by governments and institutional parties to overcome it. For many decades, subsidized credit was provided to the poor of the society as 'cost of credit' was considered a major problem faced by many poor. However, then came the realization that the major concern of the poor was not the 'cost of credit' but 'access to credit' (Srinivasan & Sriram, 2003). It has been said many times in the literature, that non-access to credit and other financial services is a major obstacle to prosperity of poor people in developing countries (Hermes & Lensink, 2007).

Against this backdrop, microfinance serves as a lifesaving instrument as it provides financial and social services to the underprivileged and excluded members of society, who have no access to traditional financial services offered by conventional financial institutions. The concept of microfinance emerged formally in the 1970s when Muhammad Yunus started his micro-lending program in Bangladesh in response to increased poverty levels (Daher & Le Saout, 2013). Since

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microfinance institutions (MFIs), especially in Asia, were developed in response to prevailing poverty conditions, they have played a major role in economic and financial development. As most MFIs in Asia offer services exclusively to women, they bring about female empowerment and gender equality. Other benefits of microfinance are education for children, improved health and standard of living of people, and increased employment levels in regions where a majority of the population lives below the poverty line (Brau & Woller, 2004; Hulme & Mosley, 1996). Therefore, it is very important to study and bring advancement in microfinance.

Good corporate governance (CG) is seen as a basic building block of success for MFIs as it helps them in achieving their social and financial goals. It is defined as the mechanism for setting goals and objectives of company and the means of achieving those goals and objectives (OECD principles of CG, 2004)<sup>1</sup>. In the context of microfinance, the term 'governance' was first used by CGAP in 1997 as a system of checks and balances in an institution where a board acts as the supervisory body. The field of CG arises in a context where agency conflicts are present. Agency theory states that the managers are the controllers of the firm while shareholders are the owners, and a conflict is present between their interests. CG provides a solution to the problems arising from agency conflicts and is defined as the mechanism which forces managers to act in the best interest of shareholders.

In the last few decades, CG has attracted a lot of attention from MFI stakeholders because many failures of MFIs were linked to weak governance systems. Microfinance induced suicides in India in 2010, showed that weak CG structure in MFIs can have serious consequences. According to [Microfinance Banana Skins \(2008, 2012\)](#) non-compliance with good governance practices is considered one of the most pressing risks faced by this sector because CG affects the quality of decision making by management, hence in turn affecting prospects for future growth of MFIs. Failure to implement practices of good governance can lead to the downfall of MFIs or undermine their effectiveness due to poor decisions, reduced access to funds in the form of capital or donations, and compromised goodwill and trust ([BBVA Microfinance foundation, 2011a, 2011b](#)).

However, measurement of CG and detailed analysis of the nexus between CG and financial performance (FP) remains an underdeveloped area particularly with respect to Asian MFIs. The general literature on CG highlights the importance of studying the direction of causality between CG and performance. This is still an under researched area in the microfinance literature.

### *1.1. Contribution of the study*

The present study responds to the need for better understanding of the governance mechanism in MFIs by studying the relationship between CG and FP in the Asian context. As CG plays a critical role in improving the overall FP of MFIs ([Labie & Mersland, 2011](#)), the comprehensive measurement of CG is of great importance. An important contribution of this study is that we employ various characteristics of CG, for example with respect to leadership and ownership structure, to construct a corporate governance index (CGI) specifically for MFIs in Asian economies. We take a different approach from previous literature, which investigated different characteristics of CG and ignored their combined effect. [Rabelo and Vasconcelos \(2002\)](#) pointed out that the corporate environment of developing countries is quite different from that in developed countries because of underdeveloped capital markets and weak legal systems. As the microfinance sector in Asia was developed specifically for a social mission, unlike in the US and Europe, it is appropriate to construct a CG framework keeping in mind the characteristics of Asian MFIs. Hence, instead adopting CG measurement practices applied to MFIs in developed countries, the present study builds a CG framework tailored to the Asian context.

This study also responds to the need for better understanding of the causal relationship between CG and the performance of MFIs, by studying first whether good governance in MFIs leads to improved FP, and then whether more financially sustainable MFIs are also better in their governance structures. While some literature of CG supports the existence of a unidirectional relationship between CG and FP ([Chen, Kao, Tsao, & Wu, 2007; Fernandez & Gomez, 2002; Mitton, 2002; Randøy & Goel, 2003; Wruck, 1989](#)), other literature highlights the importance of studying the direction of causality ([Adams & Ferreira, 2009; Bøhren & Ødegaard, 2001; Farooque, Van Zijl, Dunstan, & Karim, 2007; Farooque, van Zijl, Dunstan, & Karim, 2007](#)).

This study focuses on the microfinance sector of 18 Asian countries with respect to a sample of 173 MFIs. Asia is the main region for microfinance activity, and given the region's vast population, also has the largest number of poor households in the world. This makes Asia a significant market for MFIs.

The rest of the paper is organized as follows. The next section discusses the theoretical background of the study. Research methodology is presented in Section 3. The empirical analysis is presented in Section 4 followed by the conclusion and recommendations in Section 5.

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<sup>1</sup> OECD (Organization for Economic Co-operation and Development) principles of CG provides guidelines on CG for policy makers, regulators and institutions for both OECD and non-OECD countries and are adopted by Financial Stability Forum as one of the twelve key standards of sound financial system. Originally developed and agreed in 1999, cover six dimensions of CG namely CG framework, shareholder's rights, equitable treatment of shareholders, role of stakeholders in CG, transparency and board responsibility. Principles were revised in 2004 based on the developments made in both OECD and non-OECD countries. Principles focus on publicly traded companies but can be used to improve CG in privately held or state-owned companies as well. <http://www.oecd.org/corporate/oecdprinciplesofcorporategovernance.htm>.

## 2. Theoretical background

CG is defined as the mechanism for setting the goals and objectives of company and the means for achieving those goals and objectives. It involves the relationships among a company's top management, board of directors, shareholders, and other stakeholders such as employees and customers (OECD principles of corporate governance, 2004). The concept attracted the interest of financial economists after the 1976 publication of an article by Michael Jensen and William Meckling. However, there are studies which claim that CG dates back as early as 1776 when Adam Smith in his book "Wealth of Nations" wrote:

"Being the managers of other people's money . . . it cannot be expected that they should watch over it with the same anxious vigilance"

The field of CG analysis arose from a recognition of agency conflicts present within the firm. Agency theory states that the managers are the controllers of a firm while shareholders are the owners and there is a conflict between their interests. CG provides a solution to the problems arising from agency conflicts. Forms of the solution can involve binding managers in contracts, monitoring them, or providing them with incentives (Denis, 2001).

Resource dependence theory (RDT) has been the basis of many CG studies (Chakrabarty & Bass, 2014). This theory is concerned with how firms must engage in transactions with factors in their external environment to take control of resources which are not readily available to them. Firms deploy strategies to take control of their environment and enhance their bargaining position. These strategies include nurturing interorganizational relationships, engaging in mergers and joint ventures with other organizations, taking political action, employing powerful and competent top management, and electing powerful members of the community as directors (Hillman, Withers, & Collins, 2009). Hence, this theory considers the board an important mechanism of linking a firm to the resources in its external environment and protecting the firm against adverse environmental changes. A diverse board not only helps the firm through counselling and advice, but also provides access to scarce resources and crucial information present in the external environment (Hendry & Kiel, 2004; Hillman et al., 2009; Pfeffer & Salancik, 2003). The firms which are able to reduce the effect of adverse environmental changes, especially with regard to scarce resources, are in a better position to perform to their full potential.

### 2.1. Firm performance and corporate governance nexus

Different views are present in the literature on the nature of the CG and performance relationship. Some studies assume CG to be an exogenous variable that affects firm performance while an alternative view suggests that CG itself is affected by prior firm performance hence pointing to its endogenous nature. Many studies in the broad CG literature have treated CG as exogenous to firm performance (Chen et al., 2007; Fernandez & Gomez, 2002; Jensen & Meckling, 1976; Mitton, 2002; Morck, Shleifer, & Vishny, 1988; Ozelheim & Randø, 2003; Randø & Goel, 2003; Welbourne, 1999; Wruck, 1989). In the microfinance literature, a significant impact of different CG indicators on FP of MFIs has found (Aboagye & Otieu, 2010; Bassem, 2009; Galema, Lensink, & Mersland, 2012; Hartarska & Mersland, 2012; Kyereboah-Coleman & Osei, 2008; Mersland & Strøm, 2008, 2009; Manderlier, Bacq, Giacomini, & Janssen, 2009; Tchakoute-Tchuigoua, 2010).

Many studies have provided a rationale for two-way or reverse-causality between CG and FP in studying CG variables endogenously (Bøhren & Ødegaard, 2001; Cho, 1998; Farooque, Van Zijl et al., 2007, 2007b; Loderer & Martin, 1997). Some have highlighted the importance of studying the direction of causality (Adams & Ferreira, 2009; Borsch & Koke, 2002; Dalton, Johnson, & Ellstrand, 1999; Wintoki, Linck, & Netter, 2009). Manderlier et al. (2009) recommended that further research be done on causality from FP to CG for MFIs in South Asia. Cho (1998) concluded that investment affects the value of a firm which further affects ownership structure while ownership structure has no effect on corporate value. Gruszczynski (2006) pointed out that companies that have higher profits and low debt ratios will probably have good CG ratings. Chung and Pruitt (1996) found evidence of two-way causality in the CG and performance relationship. Farooque et al. (2007a, 2007b) Farooque, Van Zijl et al., 2007Farooque et al. (2007a, 2007b) also confirmed the bi-directional relationship and concluded that firm value is a determinant of board ownership. Chen, Lin, and Yi (2008) found that firms which changed their leadership structure were experiencing declining performance and their performance did not improve after changing leadership structure. Alix Valenti, Luce, and Mayfield (2011) found evidence in support of resource dependence theory by suggesting that board size and outsiders on the board are positively determined by firm performance.

To conclude, the literature points to the possibility that CG and FP may be jointly determined, hence suggesting the presence of reverse or two-way causality in their relationship. This is still an under-researched area in the microfinance literature, and the present study tries to fill this gap by studying the two-way relationship between CG and FP of Asian MFIs.

### 2.2. Objectives of the study

This paper investigates the presence of two-way causality between CG and FP for MFIs. First, it studies how improving CG can raise FP in MFIs. Then, it looks at whether higher FP leads to better governance structure. This study however, takes a different approach from the literature in the sense that instead of following standard CG measurement practices used for developed countries, we build a CG framework based on leadership and ownership variables tailored to MFIs in the Asian context to create an index to proxy CG quality.

Based on the foregoing discussion, we posit the following hypotheses:

**H1.** Corporate governance impacts the financial performance of MFIs.

**H2.** Financial performance impacts the corporate governance of MFIs.

### 3. Methodology

#### 3.1. Corporate governance index

In the context of microfinance, the term 'governance' was first used by the Consultative Group to Assist the Poor in 1997 to refer to a system of checks and balances in an institution where a board acts as a major supervisory body. [Campion, Linder, and Knotts \(2008, p. 73\)](#) defined CG in MFI's as:

'the process by which stakeholders guide the MFI to define and protect the mission and the institutions assets'.

CG practices in microfinance are differentiated from other sectors of the economy because of the dual mission of MFIs, the nature of ownership, and the board of directors' responsibility and risk valuation ([Rock, Otero, & Saltzman, 1998](#)). Thus, CG in microfinance can be divided into two dimensions: leadership structure and ownership structure. Leadership structure involves issues related to the board of directors and the top management team while ownership structure deals with different institutional setups in microfinance.

The board is the most important element of leadership and control because it is the board that has the final power and responsibility over firm decisions ([Jensen, 1993](#)). The board acts on behalf of shareholders to serve as liaison with managers. Agency theory advocates separating management decisions from corporate control by differentiating the roles of CEO and chairman of the board. The board is thus empowered to guide managers in making strategic decisions and to monitor and supervise them in acting on those decisions ([Jensen, 1993](#)). Agency theory holds that CEO duality brings more CEO entrenchment in the organization which hinders the board's ability to effectively monitor management decisions.

Studies of microfinance have provided evidence of the relationship between various CG indicators and overall performance of MFIs ([Aboagye & Otiaku, 2010; Bassem, 2009; Boehe & Cruz, 2013; Galema et al., 2012; Hartarska & Nadolnyak, 2007; Kyereboah-Coleman & Osei, 2008; Mersland & Strøm, 2008, 2009; Mori & Mersland, 2014; Strøm, D'Espallier, & Mersland, 2014; Tchakoute-Tchuigoua, 2010; Thrikawala, Locke, & Reddy, 2013](#)). However, these studies generally ignore the combined effect of different CG variables, which is deemed to matter by [Bebchuk, Cohen, and Ferrell \(2009\)](#) and [Gompers, Ishii, and Metrick \(2003\)](#). [Chen et al. \(2007\)](#) pointed out that certain characteristics of CG may complement each other or may actually be proxies for some other characteristics.

[Reed \(2002\)](#) pointed out that instead of creating their own CG practices, companies from developing countries find it more convenient to blindly follow CG practices of companies in developed countries. However, the corporate environment of developing countries is different from that in developed countries in important ways that include underdeveloped capital markets and weak legal systems ([Rabelo & Vasconcelos, 2002](#)). As the microfinance sector of Asia was developed specifically for the purpose of serving a social mission, unlike its counterpart in the US and Europe, it is more effective to construct a CG framework that reflects this distinctiveness.

For example, women clients are generally considered the best target market for MFIs, as microfinance focuses on the provision of financial services to small informal sector businesses that are mostly run by women as a form of self-employment ([Armendariz De Aghion & Morduch, 2005; Brau & Woller, 2004](#)). MFIs could thus benefit by female leadership as females know better the kinds of products females like and how to target them. This argument is also supported by resource dependence theory. Many of the MFIs are non-profit organizations which are considered weak in governance structure because of high agency problems and low involvement of boards in monitoring management ([Christen & Rosenberg, 2000](#)) compared to shareholder firms.

Hence, instead of following the analytical practices adopted by MFIs in developed countries, the present study builds a CG analytical framework related to leadership and ownership dimensions, focusing on MFIs in the Asian context. A Corporate Governance Index (CGI) comprised of seven CG variables is constructed which is used as a proxy for CG quality. Each variable is allotted a value 1 for the characteristic that is presumed to be linked with improved performance of MFIs, 0 otherwise. The index is then calculated by summing all indicator values. The maximum value of the index is 7 which indicates the highest governance standard, while the lowest value is 0 which indicates the weakest standard.

The seven indicators are as follows.

##### 3.1.1. Board size

Board size should correlate with the size of the institution and should aim to achieve efficient participation of all board members ([BBVA Microfinance foundation, 2011a, 2011b](#)). Board size is measured as the number of directors present on the board. With respect to MFIs, a board size of seven to nine members is considered ideal and five to eleven members is considered effective ([Council of Microfinance Equity Funds, 2012](#)). [Hartarska and Mersland \(2012\)](#) found evidence of improved performance in MFIs with board sizes of up to nine members. A board size that is too large is considered less

efficient for firm performance (Jensen, 1993). Therefore, we measure this indicator as value equals 1 if the board size is between seven to nine members and 0 otherwise.

### 3.1.2. Board diversity

The composition of the board can be studied based on dimensions like female presence (Bassem, 2009; Thrikawala et al., 2013), member qualifications (CGAP Appraisal guide for MFIs, 2007; 2008; Council of Microfinance Equity Funds, 2012; Manderlier et al., 2009); and mix of international and local directors (Mersland, 2009). Female presence on boards is thought to be linked with better MFI performance (Bassem, 2009) due to skill advantages in public relations and communications in serving under-privileged clients (Thrikawala et al., 2013). This study measures female presence on boards with a value of 1 if the MFI has a female board member, 0 otherwise.

Hillman and Dalziel (2003) and Pfeffer and Salancik (2003) pointed out that directors provide human and relational capital to a firm and therefore play an important part in improving overall firm performance. This argument is also supported by the resource dependence theory. Manderlier et al. (2009) considered MFI boards to be qualified if they had experience and knowledge in the field of microfinance. The presence of qualified directors has been empirically linked with improved MFI performance (Council of Microfinance Equity Funds, 2012; Isern, Abrams, & Brown, 2007). This study measures board qualification with a value of 1 if the board has members with experience and knowledge in microfinance, 0 otherwise.

In conventional financial institutions, international directors are thought to be linked with superior business practices and improved FP (Oxelheim & Randøy, 2003). In the case of microfinance, local directors are considered more effective for performance as they have more knowledge about the local area and market trends. International directors are linked with higher financial costs in MFIs (Mersland, 2009). This study measures local presence with a value of 1 if local directors are present, 0 otherwise.

### 3.1.3. CEO/chairman duality

CEO/Chairman duality is defined as the presence and influence of the CEO on the board of a firm (Thrikawala et al., 2013). According to agency theory, the roles of the CEO and board chair should be separated so as to distinguish management decisions from corporate control. CEO duality gives more power and freedom in decision making to the CEO hence bringing conflict between owners and management, and ultimately reducing firm performance (Galema et al., 2012; Hartarska, 2005; Kyereboah-Coleman & Osei, 2008). The duality indicator takes a value of 1 if the CEO and chairman roles are separated, 0 otherwise.

### 3.1.4. Female CEO

Microfinance focuses on the provision of financial services to small informal sector businesses involving self-employment (Armendariz De Aghion & Morduch, 2005). This makes women the best targets for MFIs as in Asia women run the larger portion of informal sector self-employed businesses (Brau & Woller, 2004). Many MFIs in Asia that work with the mission of female empowerment can benefit by bringing in female membership at all levels of the management including its executive level (Campion et al., 2008). The presence of female CEOs in all kinds of organizations is linked with improved overall performance (Boehe & Cruz, 2013; Welbourne, 1999). Therefore, we give this indicator a value of 1 if the CEO is female, 0 otherwise.

### 3.1.5. Ownership type

Ownership type plays a very important role in the overall performance of MFIs because of their basic mission. Nonprofit organizations are generally considered more socially oriented while for-profit shareholder owned firms are considered more commercially oriented. In nonprofit organizations agency problems are higher because of their weak governance structure and low board involvement in monitoring management since they do not represent investors (Peck & Rosenberg, 2000). Due to this, CEO decision making power in nonprofit organization tends to be greater than in shareholder firms which leads to less financially sound decisions (Galema et al., 2012). Shareholder firms, on the other hand, are more regulated and thus have better sustainability (Hartarska & Nadolnyak, 2007; Lauer, 2008). Shareholder firms are also considered more technically efficient than nonprofit organizations (Servin, Lensink, & Van den Berg, 2012). This study gives ownership type a value of 1 if the MFI is a shareholder firm, 0 otherwise.

## 3.2. Sample and data

The microfinance sector in Asia was founded with the mission to offer financial services to the poor who were being excluded from conventional financial services. Microfinance has developed mainly in Asia where, given the vast population, most of the world's poor are concentrated. In 2010, about 63 percent of the world's extreme poor lived in South Asia (507 million people) and East Asia and the Pacific (246 million people).<sup>2</sup> This population forms an immense client base for microfinance, which has not gone unnoticed. Therefore, we focus on the microfinance sector of Asia as it can play an important role in the financial and economic development of the region.

<sup>2</sup> World Bank, "The State of the Poor: Where Are the Poor . . . What is the current profile of the World's poor?" (accessed April 2013).

Our data come mainly from the Microfinance Information Exchange (MIX) Market<sup>3</sup> website. Only those MFIs which have third-party rating reports are included in the final sample of 173 MFIs. When accessed in June 2011, 1044 MFIs from 18 Asian countries<sup>4</sup> were listed on the MIX Market website. Of these, 418 MFIs were rated at least 4 diamonds<sup>5</sup> by MIX Market based on the extent and reliability of data shared. We further selected only those MFIs which have third-party rating reports and our sample is therefore reduced to 173 MFIs with data for the five-year period 2007–2011. Data for the CG variables are harder to obtain as most MFIs prefer to withhold information from the general public (Hartarska, 2005). The only source of data for the variables used in the construction of the CGI is the third-party rating reports which can be accessed from the Rating Fund website.<sup>6</sup> This may introduce the problem of selection bias but nonetheless it makes our data of CG indicators more authentic and reliable than if collected from self-reported sources like annual reports and the institutions' own websites (Mersland & Strøm, 2009). Our dataset includes more commercially and professionally oriented MFIs that have chosen to be rated by third-party rating agencies to increase transparency and disclosure.

Data for the FP variables and other control variables have been gathered from the United Nations Development Program (UNDP),<sup>7</sup> the World Bank,<sup>8</sup> and MIX Market websites.

### 3.3. Financial performance

This study uses accounting-based measures to assess the performance of MFIs rather than market-based measures because many of the MFIs are private financial institutions that lack market-based measures (Strøm et al., 2014). Key measures used for assessing profitability are: return on assets (ROA); return on equity (ROE); portfolio yield (PY); and operating expense ratio (OER). These indicators are in keeping with standard analytical practice (Bruett et al., 2005; Isern et al., 2007; Rosenberg, 2009; The SEEP Network, 2010). Another standard measure is operational self-sufficiency (OSS) (Mersland & Strøm, 2009; Manderlier et al., 2009) which is the ratio of a firm's revenues to its expenses. It is important to assess the performance of an MFI in terms of its self-sufficiency because day by day many MFIs are becoming commercialized and self-dependent instead of relying on subsidies and donations (Aboagye & Otieku, 2010; Bassem, 2009; Cull & Morduch, 2007; Hartarska, 2005; Mersland & Strøm, 2009; Manderlier et al., 2009; Strøm et al., 2014).

### 3.4. Control variables

Firm risk is a firm-specific factor that affects CG practices (Black, Jang, & Kim, 2006) and is taken as a control variable of this study. Black et al. (2006) pointed out that firms facing greater risk must be better governed as they need strict monitoring systems. Mersland and Strøm (2009) and Strøm et al. (2014) used portfolio at risk 30 days past due (PAR 30) as a risk proxy. This study also measures MFI risk, PAR30, as defined by the value of loans outstanding for which payments are 30 days past due.

MFI size and MFI age are used as instrument variables for CGI, as Black et al. (2006) pointed out that larger firms have better governance systems in place. Similarly, older firms tend to be better in their governance structure than newer firms which could be because of more experience and the learning curve (Black et al., 2006). This study measures MFI size as log of total assets (Black et al., 2006; Mori & Mersland, 2014) and MFI age as number of years since establishment (Black et al., 2006; De Crombrughe, Tenikue, & Sureda, 2008).

Black et al. (2006) considered regulatory status an important governance predictor. This study assigns regulatory status, RS, a value of 1 if an MFI is regulated by a banking authority, 0 otherwise.

MFIs can be classified into three types based on their lending methodology: individual lenders; group lenders; and village banks (Cull & Morduch, 2007). Mersland and Strøm (2009) measured lending methodology as a dummy with a value of 1 if an MFI offered individual based lending services, 0 otherwise. We measure lending methodology of three types using two dummy variables: LM1 takes a value of 1 if an MFI offers individual lending services only, 0 otherwise; LM2 takes on a value of 1 if an MFI offers group lending services only, zero otherwise; and the reference category is MFIs that offer both types of lending services.

The governance mechanism of an MFI is related to its legal status (Council of Microfinance Equity Funds, 2012). We classify MFIs into five legal types represented by dummy variables which take on a value of 1 for each type, 0 otherwise:

<sup>3</sup> MIX (Microfinance Information Exchange) Market is a database for microfinance where all MFIs and supporting organizations share their data. MIX Market plays an important role in improving transparency of this sector. [www.mixmarket.org](http://www.mixmarket.org).

<sup>4</sup> The included countries are Armenia, Azerbaijan, Bangladesh, Cambodia, China, Georgia, India, Indonesia, Jordan, Kazakhstan, Kyrgyzstan, Nepal, Pakistan, Philippines, Russia, Sri-Lanka, Tajikistan, and Vietnam.

<sup>5</sup> MIX Market uses a diamond rating system to indicate level of transparency. MFIs are rated annually by MIX Market based on the amount of data shared and the presence of supporting documentation. A higher diamond score means the data are more transparent and reliable. MFIs are rated on a scale of 1 to 5 with 1 meaning their profiles are visible; 2 meaning some data on products and clients for the year are available; 3 meaning some financial data for the year are available; 4 meaning audited financial statements are published for the year; and 5 meaning a rating or due diligence report is published for the year.

<sup>6</sup> The Rating Fund website ([www.ratingfund2.org](http://www.ratingfund2.org)) contains risk assessment reports for 383 MFIs from 73 countries. These MFIs have been rated by five microfinance rating agencies (Microfinanza, Planet Rating, Crisil, MicroRate, and M-Crile) recognized by CGAP (Consultative Group to Assist the Poor). Data for a few of the indicators of CG have also been extracted from the websites of the MFIs.

<sup>7</sup> [www.hdr.undp.org/en/statistics/hdi](http://www.hdr.undp.org/en/statistics/hdi) Data collected on Jan 15<sup>th</sup>, 2014.

<sup>8</sup> [www.worldbank.org](http://www.worldbank.org) Data collected on Jan 15<sup>th</sup>, 2014.

banks, *LS1*; rural banks, *LS2*; non-bank financial institutions, *LS3*; non-government organizations, *LS4*; and credit unions, as the reference category ([Isern et al., 2007](#)).

The human development index (HDI) is used as a country control when studying the effects of CG on FP. HDI is a UNDP indicator that assess the development of countries based on people of the country and their capabilities. It covers three dimensions; standard of living; knowledge; and life expectancy. A higher value indicates higher productivity of the labor force of the country which is expected to increase the FP of firms ([Streeten, 1994](#)).

### 3.5. Model specification

The relationship between CG and FP is modeled as a pair of simultaneous equations with both variables treated as endogenous. Many of the control variables are common to both CG and FP equations. FP is proxied by five different measures each of which is entered into the model in turn for five different estimations.

Eq. (1) gives FP as a function of CGI and the control variables:

$$FP_{it} = \alpha + \beta_1 CGI_i - \beta_2 PAR30_{it} + \beta_3 HDI_t + \beta_4 RS_i + \beta_5 LM1_i + \beta_6 LM2_i + \beta_7 LS1_i + \beta_8 LS2_i + \beta_9 LS3_i + \beta_{10} LS4_i + \varepsilon_{it}. \quad (1)$$

Eq. (2) gives CGI as a function of FP:

$$CGI_i = \alpha + \beta_1 FP_{it} - \beta_2 PAR30_{it} + \beta_4 RS_i + \beta_5 LM1_i + \beta_6 LM2_i + \beta_7 LS1_i + \beta_8 LS2_i + \beta_9 LS3_i + \beta_{10} LS4_i + \varepsilon_{it} \quad (2)$$

where FP is proxied in turn by *ROA*, *ROE*, *OSS*, *PY*, and *OER*.

The variables are defined as: *CGI* =Corporate Governance Index; *ROA* = return on assets; *ROE* = return on equity; *OSS* = operational self-sufficiency; *PY* = portfolio yield; *OER* = operating expense ratio; *PAR30* = portfolio at risk 30 days; *HDI*= Human Development Index; *RS*= regulatory status; *LM1*= individual lending; *LM2* = group lending; *LS1* = bank; *LS2* = rural bank, *LS3* = non-bank financial institution; and *LS4* = non-government organization.

## 4. Discussion and analysis

### 4.1. Descriptive statistics

**Table 1** presents descriptive statistics for all variables. The FP indicators show wide variation in the sample. Return on assets has a minimum value of -0.050 and maximum value of 0.110. The negative sign on the minimum value indicates an operating loss. On average, sample MFIs earned a return of 2.8% on assets. The mean value of return on equity is 14.0% with a minimum of -27.8% and a maximum of 55.0%. The mean value of the operating self-sufficiency ratio is 1.179 with the minimum of 0.678 and maximum of 1.713. The mean value of the portfolio yield is 17.9% with a minimum of -7.4% and a maximum of 44.6%. The operating expense ratio shows a mean value of 16.2% with a minimum of 0.9% and a maximum of 36.0%.

The mean value of MFI age at 12 years shows that microfinance is a relatively young industry in Asia, although the variable does reach a maximum of 39 years. The log assets measure of size extends over a wide range. Portfolio at risk averages 6.8% with a low of 0 and a very concerning high of 71.1%. The human development index value of 0.60 shows that the countries of the sample are generally at a low level of development.

**Table 1**  
Descriptive statistics for Financial and Control Variables.

	Definition	N	Min.	Max.	Mean	Median	Std. Dev.
Return on Assets (ROA)	net income after taxes and before donations / average assets	865	-0.050	0.110	0.028	0.025	0.035
Return on Equity (ROE)	net income after taxes and before donations / average equity	865	-0.278	0.550	0.140	0.132	0.171
Operational Self-Sufficiency (OSS)	financial revenues / (financial expenses + loan loss expenses + operating expenses)	865	0.678	1.713	1.179	1.148	0.223
Portfolio Yield (PY)	[Interest, Fees, and Commissions on Loan Portfolio / Average Gross Loan Portfolio] – Inflation Rate] / (1 + Inflation Rate)	865	-0.074	0.446	0.179	0.165	0.100
Operating Expense Ratio (OER)	operating expenses / average gross loan portfolio	865	0.009	0.360	0.162	0.147	0.078
Age	years since establishment	865	1	39	12	11	7
Size	log of assets	865	0	9.710	7.195	7.177	0.799
Risk (PAR30)	(outstanding balance on loans in arrears over 30 days + total refinanced or restructured loans) / outstanding gross portfolio	865	0	0.711	0.068	0.016	0.297
Human Development Index (HDI)	index of living standard, life expectancy and education	865	0.440	0.784	0.600	0.551	0.095

Note: Data are for 173 MFIs over a five-year period. Source: Authors calculations.

CGI is an ordinal variable, constructed using seven CG variables related to leadership and ownership structure. Its values range from 0 to 7. Descriptive statistics are shown in [Table 2](#). Our panel is structured in such a way that CG variables are constant for a given MFI over the time period as governance structure of the firms is generally stable over time ([Mersland & Strøm, 2009](#)). However, considerable variation is shown across MFIs. Four MFIs attained the maximum score of 7 indicating governance structures of high standard.

#### 4.2. Empirical results and discussion

##### 4.2.1. Correlation

[Table 3](#) provides a correlation matrix of all variables. All financial indicators (ROA, ROE, OSS, PY) except OER are positively and highly significantly correlated with each other ( $p < 0.01$ ), which confirms that these indicators are various dimensions of FP broadly. OER has a negative and highly significant correlation ( $p < 0.01$ ) with all financial indicators except PY. The positive and highly significant correlation (0.437,  $p < 0.01$ ) with PY indicates that MFIs having higher administrative and overhead costs earn higher yields on their portfolios. None of the financial variables are significantly correlated with CGI. This shows that CG as captured by our measure is not related with FP. This may be because MFIs, especially in Asia, are more socially oriented with the goals like poverty reduction and female empowerment. These results are in line with [Strom et al. \(2014\)](#) who found negative and insignificant correlation of ROA, ROE, and OSS with CG variables.

The positive and highly significant (0.109,  $p < 0.01$ ) correlation of age with ROE, and negative and significant (-0.085,  $p < 0.05$ ) correlation of age with OER show that MFIs earn higher profits and bear lower costs as they get older. Age has insignificant correlation with CGI. Size (log of assets) has positive and highly significant correlation (0.088,  $p < 0.01$ ) with CGI which shows that larger MFIs are better governed, consistent with [Black et al. \(2006\)](#). PAR 30 has negative and significant correlation ( $p < 0.05$ ) with ROA, ROE, and OSS which shows that MFIs having riskier portfolios earn lower returns. PAR 30 has insignificant correlation with CGI.

##### 4.2.2. Regression analysis

To test the relationship between CG and FP, we estimate Eqs. (1) and (2) as a simultaneous system. First though, for comparative purpose, we estimate the two equations individually with results presented in [Table 4](#). Employing regression analysis equation by equation, we find no statistically significant effects in either direction between CGI and FP. These results imply that FP does not improve with better CG, nor does better CG improve with FP. However, these results may suffer from model misspecification given that the literature highlights the presence of endogeneity in the relationship between CG and FP ([Adams & Ferreira, 2009](#); [Bøhren & Ødegaard, 2001](#); [Chen et al., 2008](#); [Chung & Pruitt, 1996](#); [Cho, 1998](#); [Farooque, Van Zijl et al., 2007, 2007b](#)).

To address any potential endogeneity problems, we adopt a two-stage least squares (2SLS) instrumental variables approach. For Eq. (1), which expresses FP as a function of CGI, we take MFI size and age as instruments for CG. We need instruments which are highly correlated with CGI but uncorrelated with FP. The type of governance structure that MFIs adopt depends heavily on age and size. As MFIs grow in size, the complexity of their operations increases, hence the need arises for more formal and refined governance mechanisms. Similarly, as firms get older, they learn what governance mechanisms work and hence modify their governance structures in response to internal and external needs ([Black et al., 2006](#)). [Strøm et al. \(2014\)](#) found support for the influence of size and age on MFI governance structure and argued that the larger and older an MFI, the greater the need for strict monitoring and control mechanisms to be in place. They posited that as a firm matures, its entrepreneurial spirit tends to subside, and it becomes more formal in its operations and governance. Larger MFIs have larger board sizes and include more diverse stakeholders on their boards than smaller MFIs. In contrast, younger MFIs have more donor representation on their boards ([Mori & Mersland, 2014](#)). In light of this literature, we take as instrument for CGI size (log of assets) and age (number of years since establishment).

For Eq. (2), which expresses GGI as a function of FP, we take HDI as an instrument for FP. HDI has a very strong correlation with FP and is uncorrelated with CGI. This makes it a valid instrument for measuring the effect of FP on CGI. A higher HDI value for a country not only indicates a well-nourished, healthy, educated, and skilled labor force but also higher productivity

**Table 2**  
Descriptive Statistics for CGI.

CGI	Frequency	Percent	Cum.
1	1	0.6	0.6
2	8	4.6	5.2
3	28	16.2	21.4
4	54	31.2	52.6
5	53	30.6	83.2
6	25	14.5	97.7
7	4	2.3	100
Total	173	100	

Source: Based on authors self-calculations.

**Table 3**

Correlation matrix of CGI with FP and control variables.

	1	2	3	4	5	6	7	8	9	10	11
1 CGI	1										
2 Return on assets (ROA)	-0.059	1									
3 Return on equity (ROE)	-0.029	0.666**	1								
4 Operational self-sufficiency (OSS)	-0.047	0.793**	0.660**	1							
5 Portfolio yield (PY)	0.033	0.284**	0.131**	0.097**	1						
6 Operating expense ratio (OER)	0.050	-0.134**	-0.227**	-0.292**	0.437**	1					
7 Age	0.041	0.047	0.109**	0.013	-0.014	-0.085*	1				
8 Size	0.088**	0.031	0.095**	0.087*	-0.169**	-0.288**	0.413**	1			
9 Risk (PAR 30)	0.000	-0.071*	-0.075*	-0.082*	-0.043	-0.042	0.145**	0.038	1		
10 HDI	-0.047	0.120**	-0.099**	0.058	0.264**	0.200**	-0.109**	-0.100**	-0.044	1	

Note: \*\* Statistical significance is represented by \*\* at 1% level, \* at 5% level. Sample size is 173 MFIs over five years. Source: Author calculation

**Table 4**

Estimation Results by Individual Equation.

Variables	Eq. (1): Financial Performance					Eq. (2): Corporate Governance				
	ROA	ROE	OSS	PY	OER	CGI	CGI	CGI	CGI	CGI
CGI	-0.001 (-1.08)	-0.003 (-0.63)	-0.006 (-0.94)	0.004 (1.53)	0.003 (1.35)					
Return on assets (ROA)						-1.188 (-1.06)				
Return on equity (ROE)							-0.149 (-0.64)			
Operational self-sufficiency (OSS)								-0.164 (-0.93)		
Portfolio yield (PY)									0.617 (1.54)	
Operating expense ratio (OER)										0.713 (1.37)
Risk (PAR30)	-0.008 (-2.04)	-0.048 (-2.49)	-0.066 (-2.59)	-0.007 (-0.65)	-0.003 (-0.36)	0.012 (0.09)	0.016 (0.12)	0.012 (0.09)	0.030 (0.22)	0.027 (0.20)
HDI	0.036 ***	-0.132 **	0.085 ***	0.274 ***	0.159 ***					
Regulated status	-0.002 (-0.68)	0.003 (0.17)	0.025 (1.21)	-0.020 **	-0.021 ***	0.028 (0.27)	0.034 (0.33)	0.036 (0.35)	0.053 (0.50)	0.054 (0.50)
Individual lending	0.008 ***	0.027 **	0.047 **	-0.008 (-0.94)	-0.040 (-5.76)	-0.388 (-3.73)	-0.397 (-3.83)	-0.391 ***	-0.401 (-3.77)	-0.376 ***
Group lending	-0.003 (-0.78)	0.004 (0.27)	-0.025 (-1.20)	-0.010 (-1.14)	-0.017 (-2.42)	0.091 (0.88)	0.098 (0.95)	0.091 (0.88)	0.111 (1.07)	0.114 (1.09)
Bank	-0.002 (-0.21)	-0.044 (-1.31)	-0.030 (-0.68)	-0.011 (-0.58)	-0.013 (-0.85)	0.496 (2.18)	0.494 **	0.494 **	0.513 **	0.513 **
Rural bank	0.015 *(1.86)	0.084 **	0.076 **	0.014 *(0.64)	-0.038 *(2.18)	0.442 **	0.445 *(1.71)	0.441 *(1.71)	0.442 *(1.71)	0.471 **
Non-bank institution	0.016 ***	-0.001 (-0.03)	0.033 (0.82)	0.027 (1.57)	-0.013 (-0.96)	0.258 (1.23)	0.241 (1.16)	0.246 (1.18)	0.228 (1.09)	0.252 (1.21)
Non-government organization	0.015 **	0.024 (0.75)	0.028 (0.67)	0.026 (1.45)	-0.014 (-1.01)	0.129 (0.61)	0.121 (0.57)	0.119 (0.56)	0.112 (0.54)	0.134 (0.64)
Constant	-0.000 (-0.01)	0.222 *	1.112 ***	-0.006 (-0.16)	0.096 ***	4.218 (19.74)	4.212 ***	4.383 ***	4.071 ***	4.040 ***
No. of Observations	865	865	865	865	865	865	865	865	865	865
F Statistics	4.85 ***	3.94 ***	3.01 ***	9.78 ***	9.80 ***	3.44 ***	3.36 ***	3.41	3.59 ***	3.53 ***
R Squared	0.054	0.044	0.034	0.103	0.103	0.035	0.034	0.035	0.036	0.036
Root MSE	0.035	0.168	0.221	0.095	0.074	1.143	1.143	1.143	1.142	1.142

Note: This table reports the results of ordinary least squares regression for Eqs. (1) and (2). The reference category for the dummy variables on individual and group lending is lending of both types. The reference category for the dummy variables on institutional type is credit unions. \*\*\* indicates statistical significance at 1%, \*\* at 5%, \* at 10%. Source: Based on authors self-calculations

of the labor force (Streeten, 1994). A more productive labor force ultimately leads to improved performance of firms operating in the country.

Regression results for the 2SLS estimation are presented in Table 5. To test for the presence of endogeneity in the CG and FP relationship, we employ the Durbin-Wu Hausman (DWH) test MFIs. The results confirm the endogenous nature of both variables as can be seen by the very small p-values in Table 5. Hence, a simultaneous equation system using 2SLS is yields consistent and efficient estimates (Hausman, 1978).

For the Eq. (1) estimations, all five FP measures are found to be related to CGI at statistically significant levels. In the case of ROA, CGI has a positive coefficient estimate, as expected, that is significant at the 10% level, which indicates that MFIs with good governance practices, earn higher returns on their assets. For ROE and OSS, the signs are also positive and significant the 1% and 5% levels respectively providing further confirmation good governance practices lead to better financial outcomes. However, the sign of CGI is negative when PY is the dependent variable and significant at the 5% level, which is unexpected. For OER the sign on CGI is expected to be negative and that is indeed the result at a 5% level of significance, which indicates that good governance practices reduce administrative and overhead expenses. For the most part then, the results support the hypothesis that FP of MFIs improve with better governance practices. These results confirm the findings of Aboagye and Otieu (2010), Bassem (2009), Galema et al. (2012) and Hartarska (2005) that the good governance practices lead to improved FP in MFIs.

Some of the control variables are also found to be statistically significant in the FP equation estimations. MFI risk, as measured by PAR 30, shows a negative impact at the 5% level of significance on ROA and at the 10% level of significance on ROE and OSS, which indicates that riskier MFIs earn lower returns and are less self-sufficient. These results are in accord with the findings of Mersland and Strøm (2009) and Strøm et al. (2014).

**Table 5**  
Estimation Results under Two-Stage Least Squares.

Variables	Eq. (1): Financial Performance					Eq. (2): Corporate Governance				
	ROA	ROE	OSS	PY	OER	CGI	CGI	CGI	CGI	CGI
CGI	0.031 (1.69)*	0.290 (2.12)***	0.285 (1.95)**	-0.127 (-1.95)**	-0.229 (-2.28)**					
Return on assets (ROA)						14.736 (1.66)*				
Return on equity (ROE)							2.434 (1.80)*			
Operational self-sufficiency (OSS)								2.565 (1.86)**		
Portfolio yield (PY)									-1.099 (-0.72)	
Operating expense ratio (OER)										-2.540 (-1.71)*
Risk (PAR30)	-0.009 (-1.53)**	-0.055 (-1.29)*	-0.073 (-1.59)*	-0.004 (-0.19)	0.003 (0.08)	0.151 (0.92)	0.136 (0.88)	0.195 (1.12)	0.011 (0.08)	0.009 (0.07)
HDI	0.032 (1.50)	-0.165 (-1.05)	0.052 (0.31)	0.288 (3.85)***	0.185 (1.60)					
Regulated status	-0.004 (-0.72)	-0.009 (-0.24)	0.014 (0.37)	-0.015 (-0.89)	-0.012 (-0.47)	0.091 (0.75)	0.011 (0.10)	-0.021 (-0.17)	-0.003 (-0.03)	-0.040 (-0.35)
Individual lending	0.021 (2.37)***	0.146 (2.23)**	0.165 (2.37)***	-0.061 (-1.99)**	-0.133 (-2.79)***	-0.546 (-3.79)***	-0.454 (-3.98)***	-0.537 (-3.90)***	-0.398 (-3.83)***	-0.486 (-4.17)***
Group lending	-0.006 (-1.15)	-0.026 (-0.69)	-0.054 (-1.37)	0.003 (0.19)	0.007 (0.26)	0.162 (1.34)	0.070 (0.63)	0.172 (1.40)	0.070 (0.64)	0.034 (0.30)
Bank	-0.018 (-1.30)	-0.192 (-1.89)**	-0.177 (-1.64)	0.055 (1.15)	0.104 (1.40)	0.554 (2.19)**	0.598 (2.41)***	0.595 (2.29)**	0.477 (2.07)**	0.454 (1.95)**
Rural bank	0.001 (0.04)	-0.047 (-0.44)	-0.054 (-0.48)	0.073 (1.44)	0.066 (0.84)	0.285 (0.95)	0.188 (0.62)	0.271 (0.89)	0.409 (1.56)	0.286 (1.03)
Non-bank institution	0.008 (0.78)	-0.072 (-0.95)	-0.038 (-0.47)	0.060 (1.65)*	0.043 (0.78)	0.023 (0.09)	0.237 (0.09)	0.166 (0.70)	0.264 (0.70)	0.199 (0.93)
Non-government organization	0.011 (1.10)	-0.013 (-0.18)	-0.009 (-0.11)	0.042 (1.24)	0.015 (0.28)	-0.057 (-0.23)	0.033 (0.14)	0.064 (0.27)	0.120 (0.57)	0.048 (0.22)
Constant	-0.134 (-1.71)*	-0.985 (-1.70)*	-0.089 (-0.14)	0.535 (1.95)**	1.049 (2.47)***	3.902 (13.30)***	1.260 (14.16)***	4.416 (0.79)	4.750 (11.80)***	4.750 (12.19)***
No. of Observations	865	865	865	865	865	865	865	865	865	865
Wald-Chi2	25.06 ***	12.41 *	12.83 *	31.53 ***	12.21 *	27.23 ***	29.60 ***	27.07 ***	30.11 ***	31.82 ***
R Squared	0.040	0.040	0.040	0.040	0.040	0.065	0.072	0.052	0.117	0.191
Root MSE	0.051	0.372	0.397	0.177	0.273	1.262	1.216	1.284	1.147	1.161
Endogeneity	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.10	<0.01

*Note:* This table reports the results of two-stage least squares regression of Eqs. (1) and (2). For Eq. (1), MFI size and age are used as instrumental variables for CGI. For Eq. (2), HDI is used as an instrumental variable for FP. The reference category for the dummy variables on individual and group lending is lending of both types. The reference category for the dummy variables on institutional type is credit unions. \*\*\* indicates statistical significance at 1%, \*\* at 5%, \* at 10%. Source: author calculations.

The impact of lending strictly to individuals as opposed to both individuals and groups is found to have a positive and highly significant effect on ROA, ROE, and OSS and, correspondingly, a negatively significant effect on OER. Again, as with the CGI results, the positive effect on PY is not consistent with this pattern. These results indicate that MFIs can achieve better FP by offering individual lending services as compared to the traditional group lending. This finding may be attributable to the fact that individual loans tend to be of larger size than group loans. The large loan sizes make it possible for customers to invest in larger businesses and gain a firmer footing, which then results in better FP for the MFIs. In fact, two of the pioneers of group-based lending – Grameen Bank of Bangladesh and BancoSol of Bolivia – have since shifted away from traditional group-lending towards an individual-lending approach (Cull & Morduch, 2007). Our results are contrary to those of Mersland and Strøm (2009) but in line with those of Bassem (2009) and Cull and Morduch (2007) who found individual-based lenders to be more profitable than group-based lenders.

Of note, we find no significance concerning the effect of regulation on FP. This is in keeping with Hartarska and Nadolnyak (2007) and Mersland and Strøm (2009).

The estimation results of the regressions of CGI on the FP variables also find support for a relationship. The signs on ROA, ROE, and OSS are all positive and statistically significant at the 5–10% level. This indicates that better FP leads to improved CG. Consistent with this, a negative coefficient on OER, significant at 10%, shows that MFIs with lower administrative and overhead expenses have better governance practices in place. Overall, our results show the positive impact of performance on governance practices, which is in line with the findings of Alix Valenti et al. (2011), Cho (1998), and Gruszcynski (2006).

Offering only individual-based lending is found to have highly significant and negative effects on CGI. MFIs that offer group-based lending thus have better CG structures. The relationship between banks as an organizational form is positively and significantly associated with CGI. This indicates that banks have better governance systems in place than other MFI organizational types.

We find no significant association between risk and CGI. This finding is contrary to that of Black et al. (2006) that riskier firms are better governed. We further find no significant relationship between regulation and CGI which suggests that imposing more rules and oversight on the microfinance sector, does not necessarily improve governance systems.

## 5. Conclusion

This paper extends the literature on governance mechanisms in MFIs by studying the relationship between corporate governance and financial performance within the Asian context. The dataset involves 173 MFIs from 18 countries covering a period of five years from 2007 to 2011. We construct a firm-level index of corporate governance based on aspects of leadership and ownership structure that is tailored to the functioning of MFIs in Asia. Specifically, the index incorporates seven elements representing board size; board diversity with respect to gender, financial expertise, and local residency; CEO/chairman duality; female CEO; and shareholding ownership type. We then examine the relationship between the governance index and each of five measures of financial performance. In view of the simultaneity that is likely to exist between corporate governance and financial performance, we adopt a two-stage least squares estimation approach with instrumental variables.

For purposes of comparison, single equation estimation was undertaken for each of the five financial measures regressed on the governance index and the governance index regressed on each of the five financial measures, along with control variables. In no case was any statistically significant relationship found. Under the simultaneous equation framework, by contrast, statistically significant relationships emerge in both directions for most of the financial performance measures. Thus corporate governance is found to affect a variety of financial performance measures and in turn the financial performance measures are found to affect corporate governance. A statistical test for endogeneity further confirms the appropriateness of the simultaneous equations approach.

A number of exogenous variables are also found to have an effect on the variables of interest. MFIs that provide only individual-based lending are found to perform better financially than those that include group loans in their portfolios. Those with riskier portfolios as measured by loans that are 30 days past due are found to perform less well. By contrast, MFIs that provide individual-based lending only are found to have lower corporate governance scores. The legal status of bank for an MFI is found to be associated with better governance than other legal forms (rural bank, non-bank financial institution, non-government organization, or credit union).

While this study has focused on financial performance as an outcome, most MFIs in Asia are not established with financial success as their main goal. Rather, social goals, such as poverty alleviation and female empowerment, are generally foremost. In view of this, a topic for future research would involve examining the relationship between corporate governance and the achievement of social goals and more broadly the three-way relationship that also encompasses financial performance.

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