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Microfinance institutions and International Financial Reporting Standards: An exploratory analysis¹

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Abstract

Previous studies analyzing firms' incentives to choose international accounting standards show that firms with strong contracting incentives will be more likely to comply with International Financial Reporting Standards (IFRS). These studies are mostly centered on developed economies and are based on European and US data. Little is known about development finance organizations' incentives to choose to draft their financial statements according to IFRS. Because commercialized microfinance institutions (MFIs) have strong contracting incentives, we investigate whether commercialization drives the choice of IFRS and study a pooled international sample of MFIs' audited financial statements extracted from the MIX from 2007 to 2014. Consistent with our predictions, evidence shows that commercialization and maturity (age) are likely to drive the MFIs' choice to comply with IFRS. Results are robust after controlling for heterogeneity in national regulations with regard to IFRS.

Keywords: International Financial Reporting Standards (IFRS), Microfinance, Maturity, Commercialization

JEL codes: G21, G30, M41, O16

1. Introduction

There is a common belief that International Financial Reporting Standards (IFRS) have improved the transparency and quality of financial disclosure of firms that have chosen to comply with them when preparing their financial statements (García et al., 2017). Around the world, IFRS are generally mandatory for public firms and also for firms or organizations that are located in countries where regulators have imposed this accounting framework in some or all cases. In some parts of the world there is strict enforcement and in others these requirements are basically ignored by regulators. The microfinance landscape has evolved and changed over the past two or two decades, with the IPOs of Compartamos, a Mexican microfinance institution (MFI), and Equity Kenya, as illustrations. Some MFIs have chosen to voluntarily comply with IFRS for the preparation of their accounting books. This article thus analyzes the characteristics of MFIs that choose to prepare their publicly available financial statements in compliance with IFRS.

From the perspective of the development of accounting practices across activities and geographical regions, the adoption of IFRS in the microfinance industry is itself an interesting phenomenon. Our emphasis, however, is not so much the general evolution of accounting practices but rather the importance for the microfinance industry to efficiently communicate its activities, performance, and financial positions to outsiders. In particular, it is this aspect that makes IFRS adoption by MFIs an important issue. MFIs are hybrid or double-bottom-line organizations that combine banking and development motivations in running their businesses (Battilana and Dorado, 2010). In developing and emerging economies, these double-bottom-line institutions are more likely to grant loans to the poor and to small businesses excluded from conventional financial services through different

kinds of lending technologies. Recent nonacademic studies provide a picture of the growth of the microfinance sector and the contribution of MFIs to the financial inclusion of the poor.¹ Most MFIs around the world do not uniformly adopt accounting standards for financial reporting purposes. General acceptable accounting principles (GAAP) applied by MFIs vary from one country to another and from one region to another. Some MFIs comply with a country-specific GAAP. Others can comply with regional standards, as is the case for MFIs operating in the *Organisation pour l'Harmonisation en Afrique du Droit des Affaires* (OHADA) zone, which has accounting standards common to the 17 member countries² of this zone. Some others adopt IFRS. The SEEP (2009) notes that IFRS may be adopted by MFIs operating in countries where national accounting standards do not exist or are not well articulated. In other countries, MFIs may use different standards when preparing financial reporting for different stakeholders: national standards for regulatory authorities and IFRS for international donors and investors. As most MFIs operate in jurisdictions where the adoption of IFRS is not mandatory, most comply with national accounting standards to prepare their accounts. What, then, are the characteristics of MFIs that voluntarily adopt international accounting standards such as the IFRS? In other words, what are the reporting incentives for MFIs that voluntarily comply with the IFRS? This study provides an answer to this question. More specifically, we are interested in the question of whether there is a maturity effect in the decision to comply with IFRS and whether the trend toward commercialization that the microfinance sector experienced since the new millennium has encouraged MFIs to choose international accounting standards such as the IFRS when preparing their financial statements. We therefore identify micro-level characteristics of MFIs that choose to draft their financial statements according to the IFRS. We focus on maturity (age) and ownership type.

The focus on MFIs' use of accounting standards is motivated by at least two reasons. First, microfinance has become attractive and offers international investors wishing to diversify their portfolio of assets the opportunity to invest in microfinance (Brière and Szafarz, 2015; Galema et al., 2011; Krauss and Walter, 2009). Second, in recent years, the microfinance sector has experienced some significant developments, such as the trend toward commercialization, which has led some MFIs to move from a development-inspired movement toward a more business-oriented perspective through an evolution of ownership form: from NGO to profit-oriented. In this context of commercialization, MFIs that comply with IFRS signal their transparency and the quality of their financial information in order to lower the cost of external financing and improve capital flows. Using IFRS will demonstrate transparency by enhancing the international comparability and quality of financial information, enabling MFI funders to make informed economic decisions. Indeed, the literature indicates that preparing financial statements in accordance with IFRS limits risk and information costs and that lowering information risks is associated with the lower cost of capital (Francis et al., 2004). Financial statement quality seems to be an important prerequisite to accessing external commercial funding on favorable terms, and, therefore, complying with IFRS can be useful in improving the quality of reporting and accounting figures. This article thus analyzes the characteristics of MFIs that choose to prepare their financial statements in compliance with IFRS.

¹ See, for example, the 2015 Microcredit Summit report and the 2018 microfinance barometer that provide a global picture of the microfinance sector. According to the 2017 barometer, in 2016, the global microfinance market recorded an annual loan portfolio growth of 9.4% and annual growth of 9.6% in the number of borrowers.

² The Uniform Act relating to accounting law and financial information of the OHADA accounting system has been adopted by the following 17 countries: Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Gabon, Guinea, Guinea Bissau, Equatorial Guinea, Mali, Niger, R.D. Congo, Senegal, and Togo.

Existing studies on the determinants of the choice of accounting standards, which our study numbers among, focus mainly on publicly listed firms and unlisted private firms in developed countries (André and Kalogirou, 2019; Ashbaugh, 2001; Bassemir, 2018; Cuijpers and Buijink, 2005; El-Gazzar et al., 1999; Francis et al., 2008; Guerreiro et al., 2012). These studies, which examine either firms' incentives or benefits to complying with IFRS, are mostly centered on developed economies and are based on European and US data. Our article is among the first to consider IFRS adoption using global data from development finance organizations such as MFIs in developing and emerging countries.

Some previous cross-country and case studies have been interested in analyzing the factors affecting the adoption of international accounting standards by developing countries (Chamisa, 2000; Ionascu et al., 2014; Zeghal and Mhedhbi, 2006) and many come to the conclusion that countries with an emerging financial market are more likely to adopt IFRS. To the best of our knowledge, with the notable exception of Bova and Pereira (2012) and Prather-Kinsey (2006), little is known about the firms' incentives to adopt IFRS in developing countries. These developing economies studies are single-country-based studies, and they analyze cross-sectional variations in IFRS compliance. However, these studies do not include financial firms such as MFIs, which produce financial statements for their various stakeholders. The question of which accounting standards are used by MFIs as well as the determinants of the choice of accounting standard therefore remains an underexplored and unanswered issue for these organizations and are recognized as a powerful tool of development.³ Our study thus builds on these developing economy-based accounting choice studies by analyzing factors that are likely to drive IFRS adoption in organizations operating in the field of development finance such as MFIs. In addition, we analyze a cross-country sample, which leads us to consider MFI-specific factors that determine the choice of an accounting standard by controlling for country fixed effects. Because different countries may have different regulations with respect to the adoption of IFRS, we also control for heterogeneity of regulation across countries.

Moreover, the accounting literature specific to microfinance is still growing, and to date only two studies deal with accounting quality issue in the microfinance industry: an exploratory study (Beisland and Mersland, 2014) that compares the quality of MFI accounts according to whether MFIs are nonprofit organizations or not and Tchakoute Tchuigoua (2018a), who examines the impact of corporate governance effectiveness on MFI earnings quality. Tchakoute Tchuigoua's (2018a) study is the only one in the microfinance industry that accounts for IFRS in explaining MFI accounting quality. Indeed, while focusing on the impact of corporate governance effectiveness on earnings quality, the author controls for choice of the IFRS and shows that the adoption of the IFRS has a limited effect on the quality of accounts. However, similar to previous studies, this result could be driven by self-selection bias especially because for most MFIs, IFRS adoption is voluntary. By analyzing factors driving the choice of the IFRS in hybrid organizations such as MFIs, we also build on and complement the work of Tchakoute Tchuigoua (2018a), which covers the 2001 to 2011 period. This study, however, covers the 2007 to 2015 period, that is, after 2005, when the International Accounting Standards Board made the adoption of IFRS mandatory for certain types of companies in certain jurisdictions. As opposed to Beisland and Mersland (2014) and Tchakoute Tchuigoua (2018a), our article is among the first to analyze IFRS adoption using a broader global data from developing and emerging countries.

³ Although microfinance is recognized as a development tool, there is still a debate on the magnitude and importance of its social impact. The conclusions of some impact studies diverge. Banerjee et al. (2015a) find heterogeneous effects of microfinance on financial inclusion, but Banerjee et al. (2015b) find a modestly positive but not transformative effect.

Finally, in jurisdictions that have adopted IFRS, the preparation of financial statements in accordance with these standards is required and or permitted for domestic public companies, for listings by foreign companies, or for some small- and medium-sized enterprises (SMEs). To the best of our knowledge, the IFRS adoption by MFIs over the period covered by the study (2007–2014) is not mandatory. In this article, we thus consider an MFI's decision to adopt IFRS as a voluntary decision and thus analyze the determinants of the decision to comply with the IFRS. In this sense, we add to the existing broad literature on MFI organizational choices and their determinants, including, among others, the choice to provide savings products (Cozarenco et al., 2016), the choice to decentralize the loan decision process (Tchakoute Tchuigoua, 2018b), the choice between an individual and a joint liability lending model (De Quidt et al., 2018), and, finally, the choice of an auditing firm (Beisland et al., 2015).

To achieve our objective, we study an unbalanced panel of MFIs' audited financial statements (AFS) over an 8-year period (from 2007 to 2014) from 71 countries. We estimate a pooled probit regression and find that IFRS adoption of MFIs can be explained by ownership type and maturity.

The remainder of the article is organized as follows. Section 2 presents the background literature review and the development of the hypotheses. Section 3 explains the research design. Section 4 presents the results and robustness tests, and Section 5 concludes with an acknowledgment of the research limitations and avenues for future research.

2. Background and development of hypotheses

2.1. Prior literature

In the current literature, there is a common perception that expected benefits of IFRS determine their adoption by firms. Financial reporting under IFRS is associated with higher accounting quality than financial reporting under the local GAAP of most countries. Accounting quality in this context is often taken to mean that IFRS reporting provides less opportunity for earnings management, more timely loss recognition, and more value-relevant accounting numbers. Some studies analyze the economic impacts of IFRS adoption with reference to financial reporting quality (e.g., Barth et al., 2008; Capkun et al., 2016; Chen et al., 2010; Christensen et al., 2013; Gebhardt and Novotny-Farkas, 2011; Leventis et al., 2011; Mongrut and Winkelried, 2019), cost of equity capital (e.g., Covrig et al., 2007; Daske et al., 2008), loan contract terms (Kim et al., 2011), and audit fees (De George et al., 2012; Kim et al., 2012).

Based on institutional theory (DiMaggio and Powell, 1991; Meyer and Rowan, 1977), another stream of the accounting literature suggests that accounting practices adopted at country and firm levels result from three types of institutional isomorphic pressures, namely, coercive pressure, mimetic pressure, and normative pressure. From the coercive pressure perspective, resource dependency concerns are likely to drive accounting choices. An example of coercive pressure—financial dependence on equity or bond markets or on cross-border funding—drives the decision to comply with international accounting standards. Organizations adopt IFRS in order to obtain foreign aid and loans (Judge et al., 2010). From the mimetic pressure standpoint, social actors tend to imitate those other social actors who are viewed as successful and legitimate. Firms' decisions to adopt IFRS will be aligned with that of organizations viewed as more legitimate. Normative pressure refers to conformity of thought resulting from training and through the existence of professional networks.

Existing empirical studies are based on the idea that firms with strong contracting incentives will be more likely to comply with IFRS (Francis et al., 2008) and with the importance of country-level institutions on firms' decisions to comply with IFRS. For example, using a cross-country sample of 3,722 private SMEs from 56 countries extracted from the World Bank Enterprise Survey (WBES), Francis et al. (2008) show that both firm-specific factors such as size, external financing, and country factors matter in IFRS voluntary adoption decisions. Firms' specific factors are important in developed economies while country-level factors predominantly drive IFRS adoption in less developed economies. Single-country studies such as Bassemir (2018), who studied a sample of about 3,000 private German firms' decisions to adopt IFRS from 1998 to 2010, finds consistent evidence regarding firm-specific effects on the decision to adopt IFRS. Based on the contracting incentives framework, André and Kalogirou (2018) examine both subsidiary- and group-level determinants of IFRS adoption by unlisted UK firms. They find that subsidiaries' decisions to adopt IFRS is aligned with that of the group and the decision to adopt IFRS is part of the group's strategy to improve monitoring and raise external debt capital. Mantzari et al. (2017), based on an institutional framework setting, examine Greek nonlisted companies' decision to adopt IFRS. They find that large firms and firms subject to substantial coercive and hegemonic pressures, such as subsidiaries of listed companies, firms that are planning to be listed, or those that are fully or partially state owned, are likely to adopt IFRS. Even if the adoption is not mandatory for some nonlisted companies (NLC), the pressures on listed companies have an indirect effect on the accounting practices of NLCs.

Bova and Pereira (2012) investigate the question of why firms comply with the IFRS and thus also the issue of reporting incentives in a country with weaker institutions. They therefore analyze the factors that explain the degree of compliance of firms with international accounting standards in a developing country, Kenya, which is characterized by a less effective enforcement of IFRS. They find strong evidence demonstrating the presence of heterogeneity in the level of compliance with IFRS in a cross-sectional sample of firms in Kenya where firms are required to adhere to IFRS. More specifically, they find that publicly traded firms exhibit greater compliance with IFRS than private firms, and among public firms, the level of compliance with IFRS is positively associated with foreign ownership. Prather-Kinsey (2006) analyzes factors affecting the choice of firms listed on the Johannesburg Stock Exchange and the Bolsa Mexicana de Valores Stock to comply with IFRS. The author's findings suggest that complying with IFRS improves the relevance and the reliability of the financial information of firms listed on those two stock markets. Converging with international accounting standards can produce relevant and reliable information in developing countries.

2.2. Hypotheses

2.2.1. Commercialization and the choice of accounting standards

The microfinance business also has internationalized the ways MFIs are funded. The internationalization or cross-border financing of MFIs is a major aspect of the commercialization of microfinance. It offers all MFIs, regardless of their ownership form, the opportunity to diversify their sources of external financing. The trend toward commercialization enables MFIs to make use of different financial instruments and to reduce their dependence vis à vis donors. The MFI can adjust its level of paid-in equity by issuing shares or other equity instruments. Possible sources of debt are private borrowing from banks and public borrowing by issuing bonds or commercial paper. Some MFIs may also be authorized to accept deposits from individuals or nonfinancial firms. For all equity

or debt funding, the capital providers (investors and creditors) require relevant financial information about the MFI that receives the funds in order to properly assess the risk and benefits associated with the investment. Indeed, the literature on charitable giving tends to show that donors set eligibility criteria, and the degree of transparency of the organizations is a determining factor in the decision to give (Parsons, 2003; Trussel and Parsons, 2007). Financial statements are the principal means of communicating financial data to investors and creditors. Access to external financing is therefore a major challenge for MFIs, and complying with IFRS can enable them to signal the quality of the financial information they provide⁴ and thus attract public and private investors. In well-functioning financial markets, the supply of funds is unlimited at the equilibrium market price. Although there are separate but interrelated markets for different funding instruments, they all have in common that the capital suppliers will require accounting information from the borrower. We thus assume that MFIs that prepare their financial statements according to IFRS will be more likely to access commercial and cross-border funding at favorable conditions.

The microfinance literature documents that for-profit MFIs are more likely to be commercialized,⁵ that is, to make use of debt and equity instruments. Indeed, the institutional life cycle theory of microfinance development and the proponents of MFI transformation (Ledgerwood and White, 2006) suggest that MFIs access capital to expand their target market and fund the growth of their loan portfolio. One advantage of for-profit MFIs is that they can access local and international investors, thereby broadening their financing mix. To the extent that international funding is a distinctive feature of for-profit MFIs, investors can be expected to pay attention to the quality of the information provided. Studies that have compared the quality of financial reporting and the degree of transparency of MFIs according to their profit orientation conclude that, at least, for-profit MFIs perform better than nonprofit ones (Beisland and Mersland, 2014; Goodell et al., 2020). For example, using a sample of rated MFIs, Beisland and Mersland (2014) compare financial reporting quality between for-profit and nonprofit organizations and find that, on average, there is little evidence of differences in earnings quality between these two subgroups of MFIs. Goodell et al. (2020) compare MFIs' financial transparency according to their profit or commercial orientation and hypothesize that for-profits will be more inclined than nonprofits to improve financial transparency. Using a sample of MFIs from the MIX database, they find that for-profit MFIs have a greater level of financial transparency than nonprofits MFIs. Their results are consistent with agency theory. For-profit MFIs maintain high disclosure levels in order to satisfy shareholder expectations. For nonprofits the pressure from donors is not sufficient enough to yield comparable levels of disclosure, because there is no market for corporate control with regard to nonprofits (Rose-Ackerman, 1996).

On the basis of these studies, we can deduce that the quality of financial reporting and the degree of transparency of for-profit MFIs will be better because their financial statements will have been prepared under IFRS. Investors will preferentially direct financial resources toward MFIs that comply with IFRS in drafting their financial statements. This coercive pressure⁶ is likely to drive IFRS adoption by for-profit MFIs. As mentioned by Beisland and Mersland (2014), the demand of high-quality reporting and more effective corporate governance is more

⁴ Note that the existing empirical literature on the effect of IFRS adoption and earnings quality has mixed and conflicting evidence (see, for example, Barth et al., 2008; Capkun et al., 2016; Jeanjean and Stolowy, 2008).

⁵ See, for instance, Liñares-Zegarra and Wilson (2018).

⁶ This coercive pressure from investors may have an adverse effect because it may give for-profit MFIs more incentives to engage in more earnings management, especially when they face distress periods. See, for instance, de Oliveira Leite et al. (2020). Because this is out of the scope of our study, we do not account for this adverse effect.

important in privately owned MFIs than in nonprofit ones. Given that for-profit MFIs are more eager to obtain market funding than others, to achieve a lower cost of capital and facilitate growth, we expect them to embrace IFRS to satisfy investor expectations. This leads to the following hypothesis.

Hypothesis 1: For-profit MFIs are more likely to use IFRS than not-for-profit MFIs.

2.2.2. MFI maturity and IFRS adoption

Scholars and professionals have for some time warned that the microfinance industry may stagnate if MFI access to more diversified funding is not strengthened (e.g., Fehr and Hishigsuren, 2006). In the so-called institutional life cycle theory of MFI development, MFI funding strategies are linked to their stage of development (Bogan, 2012; de Sousa-Shields, 2004; de Sousa-Shields and Frankiewicz, 2004; Helms, 2006). When established, an MFI will often receive a capital injection from a donor government or private organization (typically an NGO), which is the equivalent of paid-in-equity capital for a profit-seeking business start-up. In an initial phase, the MFI may receive additional financial donations from funders and may also benefit from subsidized loans (soft loans) from specialized government-level national or international institutions. Over time, depending on its profitability, a young MFI may also generate its own equity through retained earnings. However, these sources are by their very nature limited in amount. An MFI that endeavors to grow by meeting the demand for credit in its defined market will need to access more flexible and abundant funding, which can be provided only by financial markets or some microfinance investment vehicles (MIVs). In addition, to support their growth and to finance their development, some MFIs are transforming themselves by changing their institutional form, such as moving from an NGO legal status to that of a for-profit company (D'Espallier et al., 2017; Fernando, 2004; Ledgerwood and White, 2006). Others are changing their funding structure by reducing their dependence on subsidies and instead accessing commercial sources of finance, either directly on banking and financial markets or indirectly via MIVs. Moving toward commercialization by using market funding may increase an MFI's ability to expand its scale by leveraging assets (Armendáriz and Morduch, 2010). Some empirical studies show that microfinance and the financial sector are highly correlated (e.g., Brière and Szafarz, 2015; Galema et al., 2011). Compared to young MFIs whose funding depends heavily on donor grants and soft loans, private debt capital from banks or MIVs seem to be the main funding source of mature MFIs. In the last stage of MFI evolution, traditional equity financing and international funding become available (Fehr and Hishigsuren, 2006). Investors who take risks in MFIs positioned in stages 2 and 3 (corresponding to young and mature MFIs) will expect these organizations to have a financial reporting system that ensures the quality of financial reporting. These MFIs are expected to comply with IFRS when preparing their financial statements. This leads to the following hypothesis.

Hypothesis 2: Mature MFIs are more likely to comply with IFRS than younger and new MFIs

3. Research design

3.1. Model

To analyze the determinants of the voluntary adoption of IFRS by MFIs, we apply a pooled probit regression. The period covered in the study is 2007–2014, that is, after the year 2005 when use of IFRS became mandatory in many jurisdictions. However, for many MFIs, IFRS are not mandatory, even though in some countries complying

with IFRS is mandatory for some organizations. Our analysis of the MFIs' audited financial statements in the period under study shows that they chose to comply either with IFRS or with other GAAPs.

Our outcome variable is thus a dummy that takes a value of 1 if the MFI complies with IFRS in drafting the financial statement and 0 if the MFI uses a national or other GAAP. To analyze the determinants of the choice of the IFRS, we apply a pooled probit regression with robust standard errors adjusted for heteroscedasticity and clustered by MFI. The estimated model is as follows:

$$\text{probit (IFRS}_{it}) = \alpha_0 + \alpha_i X_{it} + \beta_{it} Z_{it} + \lambda_{it} CV_{jt} + \delta_i + \theta_j + \varepsilon$$

where i indexes the MFI, t the year, and j the country. Following Battilana and Dorado (2010) and Kent and Dacin (2013), we assume that MFIs are hybrid organizations with a double-bottom-line objective, that is, financial sustainability and social efficiency. X is the vector of our main test variables, namely, maturity (MFI age), and commercialization captures by MFI profit-oriented status and MFI-regulated status financial characteristics that are *MFI ownership type* and *leverage*. Z is the vector of other MFI-level variables and includes *profitability*, *the riskiness of the loan portfolio*, *MFI size*, and *auditor reputation (Big Four)*. CV_{jt} is the vector of country-level variables including *financial sector development*, country institutional features (*country governance quality*), and *country regulation with respect to IFRS adoption (IFRS permitted or required)*. δ_i , and θ_j are, respectively, year and country fixed effects.

3.2. Data and sample selection

The data used in this study are from two main sources. The first is the Microfinance Information eXchange (MIX) database,⁷ increasingly used in the microfinance empirical literature (Baquero et al., 2018; Bogan, 2012; Malikov and Hartarska, 2018; Servin et al., 2012), which enabled us to collect the MFI-level variables and, more important, data related to MFIs' choice to adopt the IFRS or not. MIX is an online microfinance platform that ensures MFI financial transparency and thus helps address the key challenges they face, namely, lack of reliable, comparable, and publicly available information. It provides data on market conditions, individual MFI performance, and the financial inclusion landscape. As of September 2017, when we gathered the data, the MIX platform disclosed information on about 2,000 key microfinance institutions around the world.

Moreover, the data disclosed by MIX are of unequal quality. To avoid data reliability issues, we focused on MFIs with at least a four- or five-diamond disclosure rating on the MIX and include only MFIs with audited financial statements in our sample, resulting in an unbalanced panel of MFI-audited financial statements over an 8-year period (from 2007 to 2014) from 71 countries. Table 1 provides a breakdown of MFI-audited financial statements according to whether they are prepared in accordance with IFRS or not. Panel A shows that, except for the years 2013 and 2014, the annual percentage of both audited financial statements and financial statements prepared in accordance with IFRS are relatively consistent. Panel B provides an analysis of the composition of our sample by country. The distribution of MFI compliance by country seems to indicate that in countries such as Bulgaria, Bosnia and Herzegovina, Albania, and Azerbaijan, the financial statements of MFIs are prepared according to IFRS, unlike some countries, such as the Philippines and Peru, for example, where MFIs comply

⁷ Using the MIX database raises the issue of sample selection bias, which we do not address in this study.

with national accounting standards. Country-level data is from the World Bank's World Development Indicators (WDI)⁸ database.

(Insert Table 1 about here)

3.3. Variables

3.3.1. Dependent variable

Our dependent variable is the accounting standard MFIs used to prepare their financial statements. Some MFIs choose to comply with a national GAAP and others with IFRS. The accounting standard used takes a value of 1 if the MFI complies with IFRS and 0 otherwise.

3.3.2. Main test variables

MFI commercialization: Following previous studies (de Quidt et al., 2018) we proxy commercialization by the MFI profit orientation, which is a dummy that takes a value of 1 if the MFI is profit-oriented (for-profit) and 0 otherwise. Profit-oriented MFIs include microfinance banks and nonbank financial institutions (NBFIs). NBFIs are legally limited in the range of services they can offer, and some of them are not licensed to gather deposits or provide savings accounts.

MFI maturity (age): The MIX defines life cycle stages by the number of years the MFI has operated: new (0–4 years), young (5–8 years), and mature (over 8 years). Following Bogan (2012), we create a dummy for each of these stages.

3.3.3. Control variables

Regulated status: As a control variable, we include *regulated status* (i.e., MFI deposit-taking status) as a dummy that takes a value of 1 if the MFI is subject to prudential regulation and 0 otherwise. Indeed, in some countries, the banking and microfinance regulatory authority sometimes issues specific accounting rules designed for MFIs or recommends an accounting standard to be followed by MFIs.

MFI size: It appears from the previous literature that the firm size plays an important role in the adoption of IFRS standards because large firms will tend to be internationalized and are likely to make more disclosures and thus are likely to comply with IFRS (e.g., Bassemir, 2018; Cuijpers and Buijink, 2005). Because large MFIs will tend to be internationalized through cross-border funding, we may expect large MFIs to be more likely to comply with IFRS. Trombley (1989) investigates the determinants of accounting choice in the software industry and finds that size does matter in the choice of an accounting standard. In, our model, we thus control for *MFI size*, which we measure by the natural logarithm of the book value of assets.

Financial dimension: As for the financial dimension of MFIs, we use the return on assets,⁹ a profitability indicator commonly used in microfinance studies (e.g., Bogan, 2012; Galema et al., 2012). Another accounting measure of profitability is return on equity (ROE), commonly used in banking studies. This measure is dependent on firm capital structure, specifically equity. Our sample includes different types of MFIs with different profit orientations

⁸ <http://data.worldbank.org/data-catalog/world-development-indicators>.

⁹ We reran our estimation using the *operational self-sufficiency (OSS)* as a profitability indicator and find consistent results. Unreported results are provided on request.

(profit-oriented vs. nonprofit-oriented), different ownership structures (for-profit MFIs, cooperatives and credit unions, NGOs), and different business models (deposit-taking and non-deposit-taking). Not-for-profit MFIs do not have equity capital for earnings purposes. Here, thus, we do not use ROE as a profitability indicator. We found it appropriate to use ROA as our profitability indicator, given that it is common to all MFIs, and may be similarly interpreted in all categories of MFIs and also for ease of comparison.

Leverage: As evidenced by previous studies (e.g., Bassemir, 2018) IFRS adoption is likely to be associated with firm capital structure and thus with leverage. Firms using IFRS are more likely to be leveraged. We also control for *leverage* to capture the MFI's capital structure and measure it by the capital adequacy ratio.

Audit quality: We account for one external governance variable, namely, audit quality, even though existing studies yield conflicting evidence. For instance, Bassemir (2018) shows that being audited by large international firms increases the likelihood of adopting IFRS because such audit firms are more likely to encourage their clients to use IFRS. André and Kalogirou (2019) find no significant evidence. Assuming that the use of a specific accounting standard, such as the IFRS, is correlated with auditor choice, we account for external audits and focus on auditor type (Big Four), which takes a value of 1 if the MFI financial statements are certified by a Big Four auditing firm and 0 otherwise.

Market-based economies: Based on Christensen et al. (2015), we argue that the voluntary choice to comply with IFRS will depend on whether the economy in which the MFI operates is a bank-based setting or a market-based setting economy. Because IFRS are designed to ensure transparency in financial markets and to convey reliable information to cross-border investors, we expect MFIs operating in bank-based economies to draft their financial statements using a national GAAP. As a proxy for bank-based economies, we use the *size of the banking sector*, measured as the domestic credit provided by the financial sector, as a percentage of GDP.

Country regulation: Any decision by an MFI to apply the IFRS needs to be made within the relevant legal and regulatory framework of the jurisdiction in which the MFI is incorporated. For our analysis, it is therefore necessary to record the IFRS adoption status of the relevant jurisdiction for each financial year for which there are data observations from it. We consider that two characteristics of the IFRS adoption status by jurisdiction and financial year will be important for our analysis. Above all, it is necessary to take into consideration whether or not the use of IFRS is permitted or required in the jurisdiction. Obviously, if IFRS are not permitted, the MFI may have no real opportunity to choose the IFRS as its financial reporting basis. Running a microfinance business in a country where IFRS are permitted or required may provide incentives to voluntarily comply with IFRS. Indeed, voluntary adoption of IFRS presupposes legislation that enables choosing an alternative to a local GAAP for drafting financial statements. We collected information on IFRS country status from the IFRS Foundation's website.¹⁰ For most of our data observations, this documentation provides clear answers to our two questions: (1) whether, at the time of observation, IFRS were required for financial reporting and (2) whether, at the time of observation, IFRS were permitted. We thus account for the fact that accounting practices are likely to be heterogeneous across countries due to the heterogeneity of the regulatory frameworks (IFRS standards are

¹⁰ <https://www.ifrs.org/use-around-the-world/use-of-ifrs-standards-by-jurisdiction/>.

applicable to a small number of countries and often only to consolidated accounts). The accounting standard can be the domestic or international one (IFRS or US-GAAP or another). The variable permitted/required is an indicator that equals 1 if IFRS are permitted or required in the jurisdiction and 0 otherwise. We find consistent results. Additionally, we find that operating in a country where IFRS are permitted/required provides strong incentives for MFIs to voluntarily comply with international accounting standards (IAS), such as the IFRS.

Table 2 summarizes all the variables used in this study with their descriptions and data sources.

(Insert Table 2 about here)

4. Results

4.1. Descriptive evidence

To limit the effect of outliers, we winsorized at the 5% level. The descriptive statistics and regressions reported consider the winsorized values.

Table 3 reports the descriptive statistics of our main variables and shows that 27% of the audited financial statements in our sample comply with IFRS. The distribution of MFIs by their legal status tends to confirm that around the world a majority (54%) of our sample consists of profit-oriented audited financial statements. The majority of audited financial statements are prepared by mature MFIs, representing 76% of the sample. In 28% of cases, the financial statements of MFIs were audited and certified by a Big Four audit firm.

(Insert Table 3 about here)

Before proceeding with the estimations, we assessed the presence of multicollinearity among the explanatory variables (Table 4). Our diagnostics reveals that multicollinearity is not a serious concern in our estimates.

(Insert Table 4 about here)

4.2. Multivariate results and discussion

Our data structure (Table 1, Panel B) shows that we have repeat observations of MFIs, that is, some are included in more than one year. Therefore, in all the estimated models, we use the cluster-robust standard error estimator, which seems more appropriate given the structure of our data. Our estimates seem robust to heteroscedasticity and serial correlation in the error term. Standard errors are robust to the clustering for each MFI. In addition, we first pooled the data and estimate a parsimonious model that includes our main test variables (profit status and maturity that capture, respectively, commercialization and experience effect) without and with control for year fixed effects (columns 1 and 2 of Table 5a). We then add some MFI-level variables and reestimate the pooled probit with control for year fixed effects (columns 3). Finally, we estimate a full model including our main test variables and MFI- and country-level variables with control for year and country fixed effects (columns 4 and 5). In Table 5b, we report the marginal effects obtained after the estimation of models described in Table 5a.

(Insert Tables 5a and 5b about here)

The values of the number of observations reported at the bottom of the regression tables change because of the nature of the macro-variable used in the regression. In addition, there are some missing observations either because some MFIs do not report to the MIX in a given year or because some MFIs do not report some variable in a given year (i.e., there are missing variables).

The results reported in Table 5a suggest that being a for-profit MFI is positively and significantly associated with the likelihood of complying with IFRS. The result is statistically significant in all specifications at the threshold of 1% and seems to support the argument that for-profit MFIs with commercial and (to a certain extent) international sources of financing (D'Espallier et al., 2017) tend to prepare their financial statements in accordance with IFRS to signal the quality of their financial reporting. Marginal effects reported in Table 5b show that being a profit-oriented MFI increases the probability of MFI financial statements being drafted under IFRS by about 19% (column 3) and 7% (column 5). Our findings suggest that for-profit MFIs are likely to comply with IFRS, which is consistent with hypothesis 1. Our results therefore support the coercive pressure view of IFRS adoption. The results are also consistent with previous accounting research that highlights the likelihood of firms exposed to capital markets choosing international accounting standards (Ashbaugh, 2001; El-Gazzar et al., 1999; Francis et al., 2008). Moreover, in line with Beisland and Mersland (2014), Servin et al. (2012), and the proponents of MFI commercialization, we consider commercialization as a proxy of governance quality (Bibi et al., 2018) and can thus conclude that having a more effective governance system, as is the case in for-profit MFIs, encourages complying with IFRS. Our findings also provide support to previous literature assuming that MFI behavior is heterogeneous according to the form of ownership. We thus complement previous works that compared the behavior of MFIs according to their institutional form. Some studies have shown that the performance and efficiency of MFIs differ according to their form of ownership (Roberts, 2013; Servin et al., 2012; Tchakoute Tchuigoua, 2010), and others have compared the quality of financial reporting and the degree of transparency of MFIs (Beisland and Mersland, 2014; de Oliveira Leite et al., 2020; Goodell et al., 2020).

As for the experience effect that we capture by maturity, the parsimonious models show that maturity is positively but at most weakly associated with the choice of IFRS. But when controlling for MFI- and country-level variables and country and year fixed effects, the coefficients remain positive but turn significant at the 1% level. Young and mature MFIs thus have a higher probability of complying with IFRS. Being mature increases the probability that an MFI financial statements is drafted under IFRS by about 10% (columns 3 to 5). Consistent with hypothesis 2, we find that MFI maturity is also associated with the adoption of IFRS. This finding is consistent with the life cycle theory of MFI development and the view that IFRS adoption by MFIs results from coercive pressure. The evolution of the MFI's stage of life cycle therefore seems to be accompanied by a modification and evolution of its financing structure. This change creates incentives for MFIs to prioritize compliance with IFRS to the detriment of domestic standards.

With respect to the control variables, the results show a significant association between being audited by a large audit firm and adoption of IFRS, and being audited by a Big Four audit firm increases the likelihood of preparing financial statement under IFRS by 19% to 23% (columns 3 and 4). In addition, MFIs with high leverage, and thus a high level of perceived risk, have a high probability of favoring national accounting standards. The results also show that operating in a poor institutional environment encourages MFIs to favor choosing IFRS.

4.3. Robustness checks

4.3.1. Addressing endogeneity concerns

Second, we reran our baseline model in order to control for potential endogeneity biases in the empirical specifications. The commercialization variable is likely to be endogenous given that adopting IFRS could be associated with changes in ownership forms (micro-bank, NGO, cooperative/credit union, and nonbank financial

institutions) and therefore lead to changes in commercial orientation. Following Baum et al. (2012), we apply the simple special regressor method advocated by Lewbel (2000), Lewbel et al. (2012), and Dong and Lewbel (2015), which is better suited than the IV linear probability model and the IV probit model for binary choice with one or more binary endogenous regressors. We find consistent evidence as shown by results reported in Table 6.

(Insert Table 6 about here)

4.3.2. *Additional control variables*

Third, we include additional variables in our baseline model. We account for the specificities and distinctive features of MFIs, especially the double-bottom-line variables, and therefore include social performance variables. We use two social performance indicators. The first one is the yield on the (real) loan portfolio, which proxies the annual interest rate charged on loans by MFIs (Cozarenco et al., 2016; Cull et al., 2007; Tchakoute Tchuigoua and Soumaré, 2019). The second is the depth of outreach, which measures outreach to the poor: the depth of outreach (DEPTH) captures the financial condition of MFI clients and is measured as the average loan size per borrower scaled by the per capita gross national income (GNI); a value above 1 means that the MFI targets wealthier clients with a higher ability to repay. These two variables can be considered as proxies for commercialization insofar as the trend toward commercialization raises concerns about microfinance mission drift (Ashta and Hudon, 2012; Copestake, 2007; Cull et al., 2009), even though empirical evidence remains inconsistent. The mission drift literature claims that MFIs that experience mission drift change their preferences by questing financial performance (higher yield on loan portfolio) and increasingly catering to wealthier clients. Consequently, the depth of outreach decreases as the size of the average loan scaled by the per capita GNI increases. Results reported in Table 7 are consistent with our baseline results.

(Insert Table 7 about here)

4.3.3. *Regional estimation*

Given that the maturity of the microfinance sector is heterogeneous across regions, we investigate whether commercialization and maturity affect IFRS adoption and if so whether effects are consistent across regions. To do so, we split the sample into six regions according to the MIX breakdown (Table 8). Table 8 shows that Latin America and the Caribbean (1,920 AFSs; 43.5%), South Asia (843 AFSs; 19.10%), and Eastern Europe and Central Asia (EECA) (671 AFSs; 15.20%) are the most represented regions in our sample. In addition, the Latin American and Caribbean and the EECA regions are those in which MFIs are most compliant with IFRS in preparing their accounts. This reinforces the fact that these regions are highly mature with heavy cross-border MFI funding.

(Insert Table 8 about here)

We reestimate our baseline model with both year and country fixed effects. As for the models for South Asia, we report the results of the model that fit our data well, that is, the results that control for year fixed effects. We do not report the models for East Asia and the Pacific or the Middle East and North Africa, due to data limitations. Reported results in Table 9 show that institutional factors and other country-level factors are likely to drive IFRS adoption in the South Asia region, whereas MFI-level characteristics such as commercialization and maturity effects are likely to drive the decision of MFIs to comply with IFRS in the Africa and LAC regions.

(Insert Table 9 about here)

5. Conclusion

This article addresses the question of whether some MFI- and country-level characteristics determine the choice of whether to adopt IFRS. We focus on MFI ownership type and maturity, and on some country-level and institutional traits, such as governance index. To achieve this goal, we studied a pooled sample of MFIs audited financial statements from 2007 to 2014. We find consistent evidence that for-profit status and maturity are likely to drive the MFI's choice to comply with IFRS. Results are robust after controlling for whether MFIs operate in a country where IFRS are permitted or required, which provides incentives to voluntarily comply with IFRS.

In this study, we have focused mainly on the adoption of IFRS. However, some MFIs in our sample operate in OHADA countries. The OHADA accounting standards are international accounting standards that apply to organizations operating in countries that have ratified this agreement. Unfortunately, we have not been able to gather information on MFI adoption of OHADA standards. The audit reports that we consulted did not enable us to identify whether the MFI operating in an OHADA country had prepared their financial statements under IFRS or complied with OHADA standards. An avenue for future research is thus examining the determinants of the MFI's choice to adopt OHADA accounting standards and whether it pays to adopt IFRS or OHADA accounting standards.

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Compliance with Ethical Standards

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Table 1. MFI sample distribution by region, year, and country*Panel A: Year breakdown*

Year	Number of non-IFRS MFI AFSs	% of IFRS MFIs	Number of IFRS MFI AFSs	% of IFRS MFIs	Number of MFI AFSs	% of sample
2007	405	12.49	155	13.23	560	12.69
2008	505	15.58	174	14.85	679	15.38
2009	459	14.16	166	14.16	625	14.16
2010	485	14.96	182	15.53	667	15.11
2011	509	15.70	166	14.16	675	15.29
2012	395	12.18	158	13.48	553	12.53
2013	274	8.45	110	9.39	384	8.70
2014	210	6.48	61	5.20	271	6.14
Total	3,242	100	1,172	100	4,414	100

Panel B: Country breakdown

	Number of MFI AFSs	% of the sample	Number of non-IFRS MFI AFSs	% of the country	Number of IFRS MFI AFSs	% of the country
Afghanistan	26	0.59	0	0.00	26	2.22
Albania	26	0.59	7	0.22	19	1.62
Argentina	57	1.29	57	1.76	0	0.00
Armenia	59	1.34	3	0.09	56	4.77
Azerbaijan	94	2.13	4	0.12	90	7.67
Bangladesh	104	2.36	88	2.71	16	1.36
Benin	25	0.57	25	0.77	0	0.00
Bolivia	154	3.49	153	4.72	1	0.09
Bosnia and Herzegovina	66	1.50	4	0.12	62	5.29
Brazil	111	2.51	108	3.33	3	0.26
Bulgaria	15	0.34	0	0.00	15	1.28
Burkina Faso	10	0.23	10	0.31	0	0.00
Cambodia	103	2.33	100	3.08	3	0.26
Cameroon	14	0.32	14	0.43	0	0.00
Chile	21	0.48	15	0.46	6	0.51
Colombia	132	2.99	129	3.98	3	0.26
Congo. Democratic Rep.	17	0.39	13	0.40	4	0.34
Costa Rica	90	2.04	43	1.33	47	4.01
Dominican Republic	57	1.29	25	0.77	32	2.73
Ecuador	332	7.52	329	10.15	3	0.26
Egypt	43	0.97	43	1.33	0	0.00
El Salvador	90	2.04	71	2.19	19	1.62
Ethiopia	11	0.25	11	0.34	0	0.00
Georgia	55	1.25	10	0.31	45	3.84
Ghana	45	1.02	29	0.89	16	1.36
Guatemala	118	2.67	44	1.36	74	6.31
Haiti	23	0.52	8	0.25	15	1.28
Honduras	122	2.76	114	3.52	8	0.68
India	458	10.38	457	14.10	1	0.09
Indonesia	17	0.39	17	0.52	0	0.00
Iraq	12	0.27	11	0.34	1	0.09
Jordan	39	0.88	0	0.00	39	3.32
Kazakhstan	38	0.86	7	0.22	31	2.64
Kenya	54	1.22	4	0.12	50	4.26
Kosovo	48	1.09	12	0.37	36	3.07
Kyrgyzstan	45	1.02	0	0.00	45	3.84
Laos	15	0.34	15	0.46	0	0.00

	Number of MFI AFSs	% of the sample	Number of non-IFRS MFI AFSs	% of the country	Number of IFRS MFI AFSs	% of the country
Lebanon	18	0.41	5	0.15	13	1.11
Macedonia	22	0.50	10	0.31	12	1.02
Madagascar	22	0.50	22	0.68	0	0.00
Malawi	17	0.39	0	0.00	17	1.45
Mexico	185	4.19	168	5.18	17	1.45
Moldova	12	0.27	0	0.00	12	1.02
Mongolia	27	0.61	1	0.03	26	2.22
Morocco	28	0.63	28	0.86	0	0.00
Mozambique	19	0.43	11	0.34	8	0.68
Nepal	91	2.06	91	2.81	0	0.00
Nicaragua	143	3.24	119	3.67	24	2.05
Nigeria	27	0.61	24	0.74	3	0.26
Pakistan	104	2.36	103	3.18	1	0.09
Palestine	37	0.84	2	0.06	35	2.98
Panama	29	0.66	6	0.19	23	1.96
Paraguay	43	0.97	43	1.33	0	0.00
Peru	213	4.83	211	6.51	2	0.17
Philippines	221	5.01	218	6.72	3	0.26
Romania	22	0.50	4	0.12	18	1.53
Russia	22	0.50	6	0.19	16	1.36
Rwanda	16	0.36	9	0.28	7	0.60
Senegal	23	0.52	23	0.71	0	0.00
Serbia	22	0.50	12	0.37	10	0.85
South Africa	14	0.32	5	0.15	9	0.77
Sri Lanka	60	1.36	60	1.85	0	0.00
Tajikistan	75	1.70	11	0.34	64	5.46
Tanzania	28	0.63	7	0.22	21	1.79
Togo	19	0.43	19	0.59	0	0.00
Uganda	33	0.75	4	0.12	29	2.47
Ukraine	11	0.25	6	0.19	5	0.43
Uzbekistan	12	0.27	3	0.09	9	0.77
Vietnam	29	0.66	29	0.89	0	0.00
Yemen	11	0.25	2	0.06	9	0.77
Zambia	13	0.29	0	0.00	13	1.11
Total	4,414	100	3,242	100	1,173	100

Table 2. Description of variables

Variable	Name	Definition
Accounting standards	IFRS (International Financial Reporting Standards)	Dummy that takes a value of 1 if the MFI complies with IFRS; 0 otherwise
Privately owned MFI	Profit-oriented MFI	Binary variable that takes a value of 1 if the MFI is privately owned; 0 otherwise
Regulation	Regulated status	Dummy variable that takes a value of 1 if the MFI is subject to prudential regulation, 0 otherwise
Age	New Young Mature	1 to 4 years 4 to 8 years More than 8 years
Social performance	Yield on loan portfolio Depth of outreach	(Yield on Gross Portfolio (nominal) – Inflation Rate)/(1 + Inflation Rate) Yield on Gross Portfolio = Interest and Fees on Loan Portfolio/Loan Portfolio Average loan size per borrower scaled by per capita gross national income (GNI)
Profitability	Return on assets	Net operating income/total assets. Measure of the MFI's capacity to use its assets to generate returns.
Auditor type	Big Four	Binary variable that takes a value of 1 if the MFI is audited by a Big 4 audit firm; 0 otherwise
Leverage	Capital-to-asset ratio	Total equity/total assets
Size of the banking sector	Domestic credit to private sector by banks (% of GDP)	Refers to financial resources provided to the private sector by other depository corporations (deposit-taking corporations except central banks), such as through loans, purchases of non-equity securities, trade credits, and other accounts receivables that establish a claim for repayment; for some countries, these claims include credit to public enterprises

Table 3. Descriptive statistics

Panel A: Summary statistics of our variables; statistics are based on an unbalanced panel of audited financial statements from MFIs over an 8-year period (from 2007 to 2014) from 71 countries

Variables	Number of observations	Mean	Standard deviation	Minimum	Maximum	Median
IFRS	4,414	0.27	0.44	0	1	0
Profit-oriented	4,410	0.54	0.50	0	1	1
Regulated	4,359	0.65	0.48	0	1	1
Age: Young	4,408	0.15	0.36	0	1	0
Age: Mature	4,408	0.76	0.42	0	1	1
Big Four	4,414	0.28	0.45	0	1	0
Capital-to-asset ratio	4,375	0.31	0.21	0.06	0.82	0.24
Size: Number of active borrowers	4,336	9.69	1.85	2.20	15.92	9.60
Profitability: Return on assets	4,265	0.02	0.06	-0.14	0.11	0.02
Yield on loan portfolio	4,240	0.23	0.14	0.04	0.58	0.20
Depth of outreach	4,318	0.50	0.56	0.04	2.16	0.27
Size of the banking sector	4,349	0.34	0.15	0.12	0.65	0.30
IFRS required or permitted	4,158	0.49	0.50	0	1	0

Panel B: Summary statistics of our variables according to whether MFIs comply with the IFRS or not; statistics are based on an unbalanced panel of audited financial statements from MFIs over an 8-year period (from 2007 to 2014) from 71 countries

Variables	IFRS AFSs (<i>n</i> = 1,172)		Non-IFRS (<i>n</i> = 3,242)	
	Mean	Standard deviation	Mean	Standard deviation
Profit-oriented	0.69	0.46	0.48	0.50
Regulated	0.68	0.47	0.64	0.48
Age: Young	0.18	0.39	0.14	0.35
Age: Mature	0.73	0.44	0.78	0.42
Big Four	0.43	0.50	0.23	0.42
Capital-to-asset ratio	0.35	0.22	0.29	0.21
Size: Number of active borrowers	9.19	1.67	9.86	1.88
Return on assets	0.02	0.06	0.02	0.05
Yield on loan portfolio	0.24	0.14	0.23	0.14
Depth of outreach	0.73	0.68	0.41	0.49

Table 4. Pearson's correlation matrix of explanatory variables

Pearson correlation matrix of our main test variables; statistics are based on an unbalanced panel of audited financial statements from MFIs over an 8-year period (from 2007 to 2014) from 71 countries

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. IFRS	1.00												
2. Profit-oriented	0.18	1.00											
3. Regulated	0.03	0.42	1.00										
4. Age: Young	0.05	0.07	0.01	1.00									
5. Age: Mature	-0.05	-0.14	-0.05	-0.77	1.00								
6. Big Four	0.20	0.28	0.11	-0.02	0.03	1.00							
7. Capital-to-asset ratio	0.12	-0.13	-0.28	0.02	-0.09	-0.09	1.00						
8. Size: Number of active borrowers	-0.16	0.25	0.21	-0.07	0.14	0.27	-0.33	1.00					
9. Return on assets	0.00	0.00	-0.03	-0.02	0.13	-0.05	0.11	0.13	1.00				
10. Size of the banking sector	-0.09	-0.05	-0.07	-0.09	0.10	-0.05	0.00	0.11	0.07	1.00			
11. Rule of law	-0.01	0.00	-0.09	0.02	-0.09	-0.06	0.06	0.11	-0.04	0.51	1.00		
12. Regulatory quality	0.14	0.10	-0.15	-0.05	0.04	0.08	0.16	-0.05	0.06	0.23	0.58	1.00	
13. IFRS required or permitted	0.31	-0.03	-0.03	-0.04	0.09	0.06	0.11	-0.17	0.06	-0.01	0.05	0.18	1.00

Table 5a: Baseline results

Pooled probit estimation of the determinants of IFRS adoption with and without controlling for year and country fixed effects and under strict exogeneity assumption of MFI-level variables. The dependent variable is IFRS, a dummy that takes a value of 1 if the MFI complies with the IFRS when preparing its financial statements; 0 otherwise. We first use the rule of law as an indicator of country governance quality and then replace it with the regulatory quality index. Our results are based on an unbalanced panel of audited financial statements from MFIs over an 8-year period (from 2007 to 2014) from 71 countries.

Notes: Robust standard errors in parentheses are adjusted for heteroscedasticity and are clustered by MFI. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

	(1)	(2)	(3)	(4)	(5)
_cons	-0.9812*** (0.1277)	-0.9624*** (0.1234)	0.3917 (0.2927)	-0.2911 (0.3345)	4.9271*** (0.4523)
Profit-oriented MFIs	0.4959*** (0.0921)	0.4942*** (0.0920)	0.6248*** (0.1108)	0.4952*** (0.1177)	0.3792** (0.1693)
Regulated			-0.0281 (0.1122)	-0.1094 (0.1201)	-0.5262*** (0.1829)
Age: Young	0.1832* (0.1012)	0.1782* (0.1029)	0.3352*** (0.1088)	0.3361*** (0.1259)	0.4626** (0.2296)
Age: Mature	0.0511 (0.1197)	0.0475 (0.1234)	0.3354*** (0.1270)	0.3584** (0.1415)	0.5589** (0.2342)
Big Four			0.7409*** (0.0997)	0.7222*** (0.1090)	0.3151** (0.1383)
Capital-to-asset ratio			0.5453*** (0.2083)	0.5065** (0.2240)	0.2213 (0.2814)
Size: Number of active borrowers			-0.2188*** (0.0285)	- (0.0304)	-0.0329 (0.0425)
Return on assets			0.9513 (0.6858)	-0.0488 (0.7282)	0.5062 (0.9966)
Size of the banking sector				-0.0502 (0.3542)	-1.1003 (1.1503)
IFRS required or permitted				0.9132*** (0.0898)	-0.0433 (0.1161)
Year fixed effects	no	yes	yes	yes	yes
Country fixed effects	no	no	no	no	yes
Number of observations	4,404	4,404	4,136	3,854	3,348
Chi 2	33.20	47.11	148.35	235.00	2,205.53
Pseudo R ²	0.0297	0.0305	0.1252	0.1871	0.5872
Log pseudo likelihood	-2,473.8866	-2,471.6613	-2,085.7974	-1,707.51	-770.78712
Percent correctly classified	73.43	73.43	75.31	80.44	90.26

Table 5b: Baseline results marginal effects

	(1)	(2)	(3)	(4)	(5)
Profit-oriented	0.16	0.16	0.19	0.13	0.07
Regulated			-0.01	-0.03	-0.10
Age: Young	0.06	0.06	0.10	0.09	0.08
Age: Mature	0.02	0.02	0.10	0.10	0.10
Big Four			0.23	0.19	0.06
Capital-to-asset ratio			0.17	0.14	0.04
Size: Number of active borrowers			-0.07	-0.05	-0.01
Profitability: Return on assets			0.29	-0.01	0.09
Size of the banking sector				-0.01	-0.20
IFRS required or permitted				0.25	-0.01

Table 6: Robustness checks 1: addressing endogeneity issue

Pooled probit estimation of the determinants of IFRS adoption with and without controlling for year and country fixed effects. The dependent variable is IFRS, a dummy that takes a value of 1 if the MFI complies with the IFRS when preparing its financial statements; 0 otherwise. Our results are based on an unbalanced panel of audited financial statements from MFIs over an 8-year period (from 2007 to 2014) from 71 countries.

Notes: Robust standard errors in parentheses are adjusted for heteroscedasticity and are clustered by MFI. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Variable	Pooled probit without control for year and country fixed effects	Pooled probit without control for year fixed effects	Pooled probit with control for year and country fixed effects
_cons	-1.6901*** (0.4687)	-1.8359*** (0.4459)	-0.5465** (0.2448)
Profit-oriented MFIs	7.8420*** (1.9818)	6.9253*** (1.7457)	0.1121 (1.1259)
Regulated	-3.4979*** (0.7474)	-3.1844*** (0.6584)	-0.5318 (0.4975)
Age: Young	0.8982** (0.3529)	0.8137** (0.3181)	0.1069 (0.1623)
Age: Mature	1.4809*** (0.5458)	1.2711*** (0.4836)	-0.0542 (0.2379)
Big Four	-1.9526*** (0.4894)	-1.7494*** (0.4326)	-0.0537 (0.0910)
Capital-to-asset ratio	0.3395 (0.3551)	0.4180 (0.3219)	0.7576*** (0.1086)
Size: Number of active borrowers	-0.1820** (0.0880)	-0.1375* (0.0783)	0.0744 (0.0674)
Return on assets	-1.5364 (1.1641)	-1.4177 (1.0634)	-0.9884*** (0.3497)
Size of the banking sector	-0.1361 (0.5171)	0.1536 (0.4741)	-0.9929* (0.5248)
IFRS required or permitted	0.6110*** (0.1241)	0.7184*** (0.1204)	-0.0184 (0.0607)
Year fixed effects	no	yes	yes
Country fixed effects	no	no	yes
Number of observations	3,854	3,854	3,854
Chi 2	93.00	120.76	1,884.23

Table 7: Robustness checks 2.

Pooled probit estimation of the determinants of IFRS adoption with and without controlling for year and country fixed effects. We also control for MFI-level specificities, namely, their double-bottom line by including two social efficiency metrics: *depth of outreach* and *yield on loan portfolio*. The dependent variable is IFRS, a dummy that takes a value of 1 if the MFI complies with the IFRS when preparing its financial statements; 0 otherwise. Our results are based on an unbalanced panel of audited financial statements from MFIs over an 8-year period (from 2007 to 2014) from 71 countries.

Notes: Robust standard errors in parentheses are adjusted for heteroscedasticity and are clustered by MFI. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

	Pooled probit without control for year and country fixed effects	Pooled probit with control for year fixed effects	Pooled probit with control for year and country fixed effects
_cons	-0.8213** (0.3764)	-0.8064** (0.3811)	4.0940*** (0.5309)
Profit-oriented MFIs	0.4553*** (0.1203)	0.4511*** (0.1198)	0.3171* (0.1689)
Regulated	-0.1470 (0.1254)	-0.1761 (0.1246)	-0.4832*** (0.1825)
Age: Young	0.3062** (0.1265)	0.3377*** (0.1278)	0.5760** (0.2432)
Age: Mature	0.2761* (0.1422)	0.3435** (0.1441)	0.6940*** (0.2410)
Big Four	0.6196*** (0.1108)	0.6159*** (0.1113)	0.2177 (0.1361)
Capital-to-asset ratio	0.6999*** (0.2321)	0.7019*** (0.2325)	0.3279 (0.2979)
Size: Number of active borrowers	-0.1398*** (0.0319)	-0.1346*** (0.0321)	-0.0132 (0.0441)
Return on assets	-0.3298 (0.7374)	-0.3921 (0.7445)	0.1469 (1.0091)
Yield on loan portfolio	0.0814 (0.3535)	0.1443 (0.3576)	1.4082** (0.5958)
Depth of outreach	0.3222*** (0.0927)	0.3297*** (0.0924)	0.3025** (0.1390)
Size of the banking sector	-0.1321 (0.3649)	0.0080 (0.3665)	-1.2921 (1.1666)
IFRS required or permitted	0.8171*** (0.0827)	0.9355*** (0.0922)	-0.0241 (0.1140)
Year fixed effects	no	no	yes
Country fixed effects	no	no	yes
Number of observations	3,816	3,816	3,322
Chi 2	214.83	247.64	2,002.79
Pseudo R ²	0.1855	0.1960	0.5951
Log pseudo likelihood	-1,694.9719	-1,673.0115	-750.40301
Percent correctly classified	80.45	80.74	90.94

Table 8: MFI sample distribution by region**Panel A: Region Breakdown**

Regions	Number of non-IFRS MFI AFSs	% of IFRS MFIs	Number of IFRS MFI AFSs	% of IFRS MFIs	Number of MFI AFSs	% of the sample
Sub-Saharan Africa	230	7.09	177	15.10	407	9.22
East Asia and the Pacific	379	11.69	6	0.51	385	8.72
Eastern Europe and Central Asia	100	3.08	571	48.72	671	15.20
Latin America and the Caribbean	1,643	50.68	277	23.63	1,920	43.50
Middle East and North Africa	91	2.81	97	8.28	188	4.26
South Asia	799	24.65	44	3.75	843	19.10
Total	3,242	100	1172	100	4,414	100

Table 9: Region-specific model

Regional specific estimation models with control for year and country fixed effects except for South Asia subsample regression. The dependent variable is IFRS, a dummy that takes a value of 1 if the MFI complies with the IFRS when preparing its financial statements; 0 otherwise. We use the rule of law as an indicator of country governance quality. Our results are based on an unbalanced panel of audited financial statements from MFIs over an 8-year period (from 2007 to 2014) from 71 countries.

Notes: Robust standard errors in parentheses are adjusted for heteroscedasticity and are clustered by MFI. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

	Eastern Europe and Central Asia		Latin America and the Caribbean		South Asia	Sub-Saharan Africa	
_cons	-1.2351 (0.9716)	-5.0465*** (1.5413)	-0.6460 (0.5580)	-2.1660** (0.9930)	0.8825 (1.3006)	-3.7960** (1.5193)	0.8154 (1.5674)
Profit-oriented MFIs	0.5188 (0.3423)	-0.0723 (0.3704)	0.2456 (0.2068)	0.6847*** (0.2500)	-0.2458 (0.3655)	1.3852** (0.5403)	1.2891** (0.5984)
Regulated	0.0347 (0.5444)	0.1335 (0.6410)	-0.7519*** (0.2066)	-0.8424*** (0.2668)	0.7084** (0.3361)	-1.3532*** (0.5071)	-1.3417** (0.5793)
Age: Young	0.3248 (0.4926)	0.3525 (0.5257)	-0.2708 (0.2085)	-0.3231 (0.2161)	-0.2048 (0.2718)	0.8650* (0.4761)	1.3070** (0.5081)
Age: Mature	-0.4074 (0.4855)	-0.3408 (0.5541)	0.4497 (0.3187)	0.5129* (0.3009)	-0.1926 (0.3458)	1.1251*** (0.4276)	1.7188*** (0.5313)
Big Four	0.2185 (0.2667)	0.2451 (0.2725)	0.1823 (0.2050)	-0.0718 (0.2068)	-0.5077 (0.3688)	1.6887*** (0.4496)	1.7145*** (0.6047)
Capital-to-asset ratio	0.1970 (0.5008)	0.3173 (0.5713)	0.7099* (0.3685)	0.5925 (0.3911)	-1.3909 (0.9555)	0.3472 (0.8957)	-1.5414 (0.9438)
Size: Number of active borrowers	0.2052** (0.0813)	0.2527*** (0.0932)	-0.1262** (0.0594)	-0.0841 (0.0707)	0.0231 (0.1060)	0.0713 (0.1321)	-0.0571 (0.1492)
Return on assets	1.5682 (1.7284)	0.8861 (1.7459)	0.5408 (1.2427)	1.1836 (1.6629)	-3.2790 (2.4402)	-6.0149*** (2.2278)	-7.0456*** (2.1423)
Size of the banking sector	-0.7104 (0.8942)	4.1204** (1.6634)	0.1133 (0.5950)	0.1971 (2.3675)	-8.8256** (3.5655)	-0.9585 (1.1962)	-2.5856 (2.9085)
IFRS required or permitted	0.0879 (0.2832)	-0.4448 (0.3532)	0.2032 (0.1279)	0.0071 (0.1543)	2.4247*** (0.7140)	2.3856*** (0.4911)	0.4447 (0.4635)

	Eastern Europe and Central Asia		Latin America and the Caribbean		South Asia	Sub-Saharan Africa	
Year fixed effects	yes	yes	yes	yes	yes	yes	yes
Country fixed effects	no	yes	no	yes	no	no	yes
Number of observations	462	436	1,808	1,713	786	329	202
Chi 2	43.83	53.89	83.72	246.35	115.88	107.27	434.73
Pseudo R ²	0.1349	0.2363	0.1386	0.4250	0.5707	0.6863	0.6465
Log pseudo likelihood	-168.49094	-145.43184	-630.54143	-412.37321	-71.577431	-70.28958	-48.483123
Percent correctly classified	85.06	86.24	85.95	89.32	97.07	89.06	88.12

Graphical Abstract

