© Marie Anna Benard

Does good client protection impact financial performance?

Brief No.4

Prepared by B. Perez-Rocha, A.G.F. Hoepner, L. Spaggiari, C. Lapenu and B. Brusky in collaboration with the e-MFP Making Microfinance Responsible Action Group

May 2014

EUROPEAN MICROFINANCE PLATFORM

NETWORKING WITH THE SOUTH

EUROPEAN MICROFINANCE PLATFORM

The European Microfinance Platform (e-MFP) was founded formally in 2006. e-MFP is a growing network of about 130 organisations and individuals active in the area of microfinance. its principal objective is to promote co-operation amongst European microfinance bodies working in developing countries, by facilitating communication and the exchange of information. it is a multi-stakeholder organisation representative of the European microfinance community. e-MFP members include banks, financial institutions, government agencies, NGOs, consultancy firms, researchers and universities.

e-MFP's vision is to become the microfinance focal point in Europe linking with the south through its members.

TABLE OF CONTENTS

DOES GOOD CLIENT PROTECTION IMPACT FINANCIAL PERFORMANCE?

B. Perez-Rocha, A.G.F. Hoepner, L. Spaggiari, C. Lapenu, B. Brusky

Serve clients well. Prevent over-indebtedness. Be transparent and price products reasonably. Treat clients respectfully, listen to their grievances and protect their privacy. It's hard to argue against any one of these things. The seven Client Protection Principles make undisputedly good sense. But do they make for good business? This is the question a multi-stakeholder group asked itself back in June 2011 during a meeting of the e-MFP Making Microfinance Investment Responsible (MIR) Action Group. A big question indeed, and one that needs a lot of data to find some answers. It turns out, however, that access to data was not a problem. The MIR group members housed some of the largest social and financial performance databases in the sector -and were willing to consolidate them to try to answer the question.

Around the table were investors (Incofin, Oikocredit, Blue Orchard and Triple Jump, with data from their due diligence processes), rating agencies (Microfinanza Rating and Planet Rating, with social ratings results), a network specialised in social performance assessments (CERISE, with its Social Performance Indicators, SPI database), and a reporting platform (the MIX, with social performance (SP) data reported by MFIs). Each came with a desire to coordinate, combine and create something greater than the sum of their individual parts.

The task of analyzing the relationship between client protection and financial performance was given to a team of four statisticians at University of St Andrews (UK). A representative of the MIR Action Group presented the results of a first analysis in June 2012, at the Social Performance Task Force meeting in Jordan. This brief presents the results of this second round of more robust analysis. The findings indicate that while the positive relationship between financial returns and some elements of client protection is clear, the relationship between client protection on the one hand and operating costs and credits risks on the other, is less straightforward. Clarifying the causal link will only be possible once the sector has sufficient historical data.

METHODOLOGY

Given that the data was pooled from an exceptionally large consortium of providers, each with their distinctive datasets, the researchers dedicated a considerable amount of time and effort to match, align and clean the data.

Step 1. Matching the data sets to the Client Protection Principles

The client protection data of the eight providers were categorized according to the Smart Campaign's Client Protection Principles: prevention of over-indebtedness, transparency, debt-collection, ethics, privacy and complaints resolution[1].

To do this, the researchers first analysed the individual datasets in detail. They then conferred individually with each data provider, to establish which items in their datasets matched one of the six Client Protection Principles.

Step 2. Aligning assessment scales

The problem with combining data from different sources is that different actors use different scoring scales. The second step therefore required the researchers to make scoring scales comparable. All data points were given a score between 0 and 1.

Step 3. Cleaning the data

Once the datasets were aligned, and scoring systems comparable, the research team set out to delete all duplicate data entries, choosing the entry deemed most reliable and complete. Researchers also filled in missing data points with MIX Market data wherever possible. The total sample covers an impressive 2,907 observations between 2004 and 2011 from 95 countries, and is quite representative of the sector. The table below displays the breakdown of the data observations by region. See full breakdown in the Appendix.

The number of data points and the reliability of the data varies by data provider. MIX Market shared self-reported data, CERISE provided a mix of validated[2] and self-reported data, investors contributed with data from due diligence visits and the specialized rating agencies provided independently validated data based on in-depth on-site visits (plus client focus groups and surveys in some cases).

Total Sample Observations: distribution by region

Region	Frequency	Percent
Sub Saharan Africa	327	11.3%
Middle East/North Africa	85	2.9%
Latin America and the Caribbean	946	32.5%
Eastern Europe/Central Asia	368	12.7%
South East Asia	368	12.7%
Unclassified	813	28.0%
Total	2,907	100.0%

---

[1] Data collection was done prior to 2011, when there were only six Smart Campaign Client Protection Principles. Subsequently the Smart Campaign made changes, adding 1 principle (Appropriate Product Design and Delivery), and merging ethics and debt collections into the principle of Fair and Respectful Treatment of Clients.
[2] Cross-checked in the field by accredited independent auditors.

STATISTICAL METHODOLOGY

The study aimed to determine the relationship between financial performance and a select number of client protection practices. The following measures were used to assess the financial performance of the institutions: Return on Equity (ROE), Return on Assets (ROA), Operating Expense Ratio (OER) and Portfolio at Risk more than 30 days (PAR 30). Prevention of over-indebtedness, transparency, debt-collection, ethics, privacy and complaints resolution were selected as the independent variables.

In order to determine the actual relationship between the financial performance indicators and client protection, the statistical analysis had to control for -i.e. "neutralize"- other variables that could affect financial performance. In this analysis, we were only able to control for age due to the quality of the dataset.

The statistical analysis looked at the simultaneous relationship between the financial and the client protection variables -this means that all the variables for each data point refer to the same year. This is because the datasets were not sufficient to provide data over time. As a result, while it was possible to establish a relationship between certain variables, it was not possible to establish causality.

KEY RESULTS

Summary Table of the Results

The following table shows the relationships between variables. Green shading indicates a positive relationship: when one of the variables has a better score, so does the other. The red shading indicates an inverse relationship: when one of the variables has a better score, the other has a worse one. Note that "better" or "worse" can mean either positive or negative values. For example, institutions usually aim for higher value ROA, but a lower value PAR30.

	ROA (Table 2A)	ROE (Table 1A)	OER (Table 3A)	PAR30 (Table 4A)
Over-indebtedness			+ (*)	
Price transparency	+ (**)			+ (*)
Collection practices	+ (*)			- (*)
Ethical staff behavior		+ (*)		
Complaints		+ (**)	- (*)	
Privacy	+ (***)			

Note: The asterisks signify the level of significance of the results; the more asterisks, the more statistically significant the relationship. (p < 0.10, ** p < 0.05, *** p < 0.01). The statistical tables are in the Appendix.*

## PART 1: CLIENT PROTECTION PAYS OFF WITH FINANCIAL RETURNS

Overall, there appears to be synergies between client protection and financial returns.

With the exception of prevention of over-indebtedness, all the client protection principles show a positive relationship either with ROA or ROE. Good practices in transparency, collection practices, ethical staff behavior, complaints resolution and privacy all coincide with better financial returns. The relationship can go in both directions, and it is difficult to say whether responsible practices help MFIs to achieve better financial results, or higher profitability enables institutions to build more effective control systems to ensure good client protection. Further research would be needed to determine directionality, with data over time; at this point, it is simply clear that a positive relationship exists.

Ethical staff behavior and collection practices are linked to higher financial returns, which means that treating clients respectfully is good for an institution's bottom line. The causality can also go the other way, whereby profitability encourages ethical staff behavior and respectful collection practices, reinforcing a virtuous circle. One hypothesis may be that when ROA is positive, there is less pressure on field staff, which may decrease the potential cases of unfair treatment of clients and extreme collection practices. This hypothesis also helps explain the synergy between good portfolio quality and respectful collection practices (see Figure 2).

Complaints resolution procedures and privacy of client data are positively linked to financial returns. This may mean that attention to client favors good financial performance, or it may indicate that MFIs with higher returns tend to invest in collecting feedback from clients, for example through grievance mechanisms, and in information systems that better protect client data.

Figure 1: Relationship between client protection and financial returns

ROA
☺ Transparency
☺ Collection
☺ Privacy

ROE
☺ Ethics
☺ Complaints
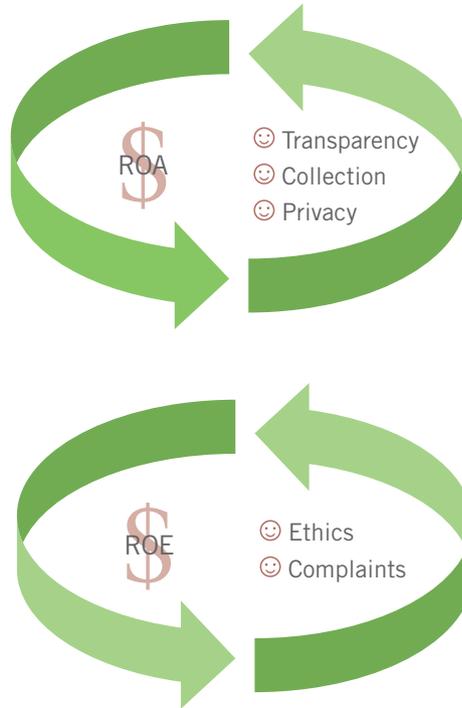
PART 2: BUT CLIENT PROTECTION MAY COME WITH A COST

While the positive relationship between financial returns and most elements of client protection is clear, the relationship between client protection on the one hand and operating costs and credit risks on the other, is less straightforward.

Results find rather weak relationships between these different elements and, moreover, they are mixed as they suggest both synergies and trade-offs. While good practices in complaints resolution are associated with lower operational costs, good practices in preventing over-indebtedness tend to be associated with higher costs. Similarly, while good collections practices coincide with lower PAR, transparency seems to be associated with higher PAR (hypotheses are discussed below). The expected positive impact of preventing over-indebtedness on portfolio quality or financial returns (see Part 1) does not emerge in a significant manner from the results.

The results suggest that client protection may trigger both positive and negative effects on financial performance. The influence of client protection in terms of costs or benefits may depend on the stage of implementation of client protection, as further explained in the Conclusion (see Box 1).

Figure 2: Relationship between client protection and operating costs credit risks
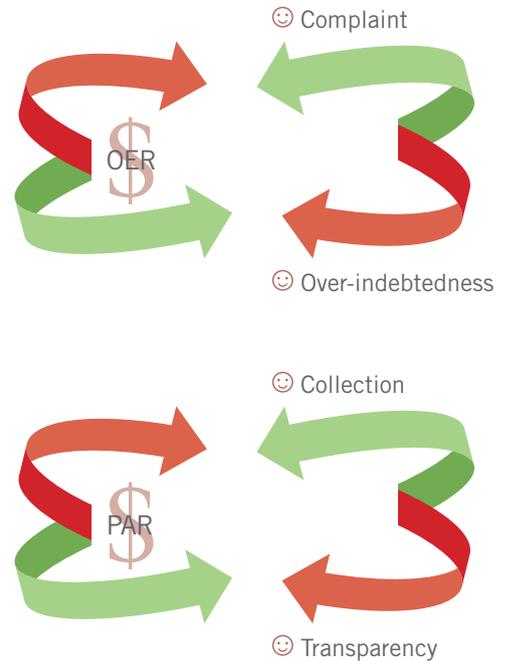
Box 1: The client protection smile

Improving client protection from a weak to an adequate level is associated with higher financial costs, but upgrading the client protection from adequate to good and very good goes along with higher ROE and financial self-sufficiency (FSS). Building client protection systems from scratch can be costly, but an MFI's efforts on client protection should pay off once the MFI has reached the client protection "minimum critical mass" necessary to build the clients' loyalty and the government and investors' trust.
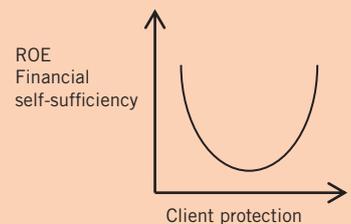
Source: Financial results - social performance matters. St. Andrews University, MicroFinanza Rating, 2012

1. Complaint resolution mechanisms decrease the operating expense ratio, while preventing over-indebtedness increases it.

	OER
Complaint resolution	- (*)

- It is intuitive that adequate complaint resolution mechanisms can decrease operating expenses thanks to a higher client satisfaction and retention effect.
- MFIs that achieved low operating expenses through streamlined processes and/or a higher loan size also appear to be more successful at resolving complaints.
- The synergy between complaint resolution and operating efficiency further explains the positive effect of complaint resolution on ROE (see Part 1).

	OER
Prevention of over-indebtedness	+ (*)

- Implementing sound systems to prevent over-indebtedness (e.g. careful repayment analysis, staff training, consultation of credit bureaus) may reduce productivity[3] and increase costs.
- Dedicating time to make a more accurate selection of borrowers according to their repayment capacity and credit history can reduce an MFI's growth pace, resulting in less portfolio volume to absorb the fixed operating costs.

2. Collection practices decrease PAR 30, but transparency increases it.

	PAR 30
Collection practices	- (*)

- Reasonable collection practices are more efficient for good repayment, because they may encourage clients to protect their repayment record in order to build a long-term relationship with the MFI. Conversely, clients who decide to quit an MFI with coercive collection practices because they have alternative sources of funds may not necessarily put extra efforts into repaying on time. Moreover, reasonable collections practices -measured in terms of having written policies on collections or staff training in these policies -suggest a more structured approach to recoveries and monitoring, which may be more effective in keeping PAR low.
- "When the going gets tough, the tough get going." When portfolio quality deteriorates, the additional pressure exerted on the staff to meet late loan recovery targets could lead to more coercive collection practices.
- The positive impact of appropriate collection practices on PAR 30 may contribute to explaining the synergy between appropriate collection practices and ROA (see Part 1).

	PAR 30
Transparency	+ (*)

- The counter-intuitive negative relationship between transparency and PAR 30 could be partly due to the fact that more transparent institutions are also more transparent on their financial performance, which means they are less likely to underestimate or hide poor portfolio quality with write offs.

---

[3] A negative correlation between prevention of over-indebtedness and productivity was found by CERISE in a 2012 study (Bédécarrats F., Baur S., Lapenu C., 2012, "Combining Social and Financial Performance: a Paradox?", Enterprise Development and Microfinance, 23 (2), pp. 241-258). A negative correlation between client protection and operating expense ratio was found by Oikocredit in a 2010 study.

ROBUSTNESS TEST

One important caveat is to validate whether the correlations between social and financial performance indicators may not simply be reflections of other MFI characteristics. To test for this, we carried out a separate statistical analysis using a set of control variables: Gross Loan Portofolio, country of origin, profit focus, legal status, lending method, number of borrowers, percentage of female borrowers, number of savers, client drop-out ratio and area of lending (i.e. urban or rural). Because of differences in availability and definitions of these additional variables among the data providers, they could not be included in the regression analysis directly, but instead had to be tested using an alternative technique (multiple pairwise cross-correlation analysis). The analysis revealed few significant relationships between control variables and client protection and financial performance variables, combined with virtually no significant relationships between the control variables and client protection variables. In other words, the results of this analysis suggest that the control variables do not influence the results discussed in the previous section.

CONCLUSION

Is client protection good for business? There is a significant positive relationship between client protection and financial returns, which suggests that protecting clients is not only an imperative of business ethics, it also enhances the financial bottom line. Good transparency, appropriate collection practices and privacy of client data are correlated with higher ROAs, while ethical staff behavior with clients and complaint resolution mechanisms are correlated with higher ROEs. As always in statistics, correlation does not imply causation. Client protection is as likely to improve an MFI's financial returns through client loyalty as much as financial strength is likely to enhance client protection by allowing investments in internal control systems, for instance. Financial outcomes and responsible treatment of clients are likely to be mutually reinforcing, triggering both virtuous and also vicious circles.

The relationship between client protection on one side and operating costs and portfolio quality on the other side is mixed: both synergies and trade-offs appear. Having complaint resolution mechanisms in place is associated with a lower operating expense ratio, possibly through the gains in client retention. Preventing over-indebtedness is correlated with a higher operating expense ratio, perhaps due to the costs of ensuring a sound analysis. The potential negative impact of the cost of preventing over-indebtedness in terms of higher prices to clients needs to be tested with more data, even if from a client perspective the cost of prevention is surely lower than the cost of an over-indebtedness crisis. Collection practices are correlated with higher portfolio quality, perhaps because clients take extra care to repay on time when they feel the MFI is suitable for a long-term relationship, and because structured recovery policies and trainings may ensure more effective collections. At the same time, however, transparency is correlated with a lower portfolio quality, possibly due to the effect that transparent institutions are less likely to mask poor portfolio quality with write-offs.

Such mixed results require further research once more data emerges. Previous research suggests that insignificant linear relationships may hide significant non-linear relationships, forming a "U-shape" (Box 1, page 7). From an operational point of view, this means that early investment in some client protection aspects might not immediately pay off, but organizations with the best practices in client protection may ultimately achieve better financial outcomes, thanks to the benefits of a good reputation. In order to test robustly these non-linear shapes, more fine-grained datasets are needed.

Over-indebtedness (assessed as the number 1 risk in the Microfinance Banana Skins 2012) and violations of clients' rights are perceived as relevant risks for the industry. Mitigating over-indebtedness risk may require higher costs in the short term, as do other measures that MFIs ordinarily take to mitigate other risks, such as investing in risk management departments, robust management information systems (MIS), etc. Still, investing in client protection is in the MFI's best interest not only because reputation risk needs to be managed, but also because it is likely to pay-off - even if not right away. Eventually, the financial benefits of good practices could outweigh the costs.

Today, the microfinance sector is uniting forces to harmonize and simplify data collection on social performance and respon-sible finance practices. MFIs, networks, investors, auditors, technical assistance (TA) providers and specialized rating agencies are moving towards a common social performance data collection framework based on the Universal Standards for Social Performance Management, in hopes of facilitating responsible management of MFIs. It is likely then that the future will bring larger, more reliable datasets: more standardized, more precise, more complete (verifying practices, not just procedures), and time sensitive. This bodes well for research on the relationship between client protection and financial performance as well as other aspects of social performance such as board and employee commitment to social goals, responsible treatment of employees and appropriate product and services. It also presents great potential for better understanding the business case for responsible finance.

APPENDIX

Country Table

Country	Freq.	Percent	Cum.
ANGOLA	2	0.07%	0.07%
BENIN	25	0.86%	0.93%
BURKINA FASO	9	0.31%	1.24%
CAMEROON	7	0.24%	1.48%
COMOROS	1	0.03%	1.51%
ETHIOPIA	13	0.45%	1.96%
GHANA	14	0.48%	2.44%
GUINEA	1	0.03%	2.48%
GUINEA-BISSAU	1	0.03%	2.51%
KENYA	31	1.07%	3.58%
MADAGASCAR	4	0.14%	3.72%
MALI	21	0.72%	4.44%
MOZAMBIQUE	2	0.07%	4.51%
MALAWI	6	0.21%	4.71%
NIGER	16	0.55%	5.26%
NIGERIA	29	1.00%	6.26%
RWANDA	3	0.10%	6.36%
SENEGAL	38	1.31%	7.67%
SIERRA LEONE	2	0.07%	7.74%
CHAD	4	0.14%	7.88%
TOGO	10	0.34%	8.22%
TANZANIA, UNITED REPUBLIC OF	34	1.17%	9.39%
UGANDA	38	1.31%	10.70%
SOUTH AFRICA	4	0.14%	10.84%
CONGO, DEM. REP. OF ZAR	6	0.21%	11.04%
ZAMBIA	5	0.17%	11.21%
ZIMBABWE	1	0.03%	11.25%
Sub-Saharan Africa (SSA)	**327**	**11.25%**	**11.25%**
EGYPT	16	0.55%	11.80%
IRAQ	3	0.10%	11.90%
JORDAN	21	0.72%	12.62%
LEBANON	22	0.76%	13.38%
SYRIAN ARAB REPUBLIC	1	0.03%	13.42%
TUNISIA	1	0.03%	13.45%
WEST BANK/GAZA STRIP	16	0.55%	14.00%
YEMEN	5	0.17%	14.17%
Middle East/North Africa (MENA)	**85**	**2.92%**	**14.17%**
ARGENTINA	33	1.14%	15.31%
BOLIVIA	162	5.57%	20.88%

BRAZIL	14	0.48%	21.36%
CHILE	2	0.07%	21.43%
COLOMBIA	38	1.31%	22.74%
COSTA RICA	51	1.75%	24.49%
DOMINICAN REPUBLIC	35	1.20%	25.70%
ECUADOR	105	3.61%	29.31%
GUATEMALA	48	1.65%	30.96%
HONDURAS	59	2.03%	32.99%
HAITI	13	0.45%	33.44%
MEXICO	78	2.68%	36.12%
NICARAGUA	73	2.51%	38.63%
PANAMA	6	0.21%	38.84%
PERU	151	5.19%	44.03%
PARAGUAY	41	1.41%	45.44%
EL SALVADOR	35	1.20%	46.65%
URUGUAY	1	0.03%	46.68%
VENEZUELA	1	0.03%	46.71%
Latin America and the Caribbean (LAC)	**946**	**32.54%**	**46.71%**
ALBANIA	6	0.21%	46.92%
ARMENIA	19	0.65%	47.57%
AZERBAIJAN	42	1.44%	49.02%
BULGARIA	20	0.69%	49.71%
BOSNIA AND HERZEGOWINA	32	1.10%	50.81%
BELARUS	1	0.03%	50.84%
CHINA	12	0.41%	51.26%
FRANCE	4	0.14%	51.39%
GEORGIA	37	1.27%	52.67%
KAZAKHSTAN	12	0.41%	53.08%
KYRGYZSTAN	33	1.14%	54.21%
KOSOVO	11	0.38%	54.59%
DENMARK	27	0.93%	55.52%
MOLDOVA, REPUBLIC OF	2	0.07%	55.59%
MACEDONIA	3	0.10%	55.69%
MONTENEGRO	9	0.31%	56.00%
MONGOLIA	19	0.65%	56.66%
POLAND	2	0.07%	56.73%
ROMANIA	3	0.10%	56.83%
RUSSIAN FEDERATION	19	0.65%	57.48%
SERBIA	4	0.14%	57.62%
TURKEY	8	0.28%	57.89%
UKRAINE	5	0.17%	58.07%
UZBEKISTAN	4	0.14%	58.20%
TAJIKISTAN	34	1.17%	59.37%

Eastern Europe/Central Asia (EAC)	368	12.66%	59.37%
BANGLADESH	8	0.28%	59.65%
BHUTAN	1	0.03%	59.68%
CAMBODIA	83	2.86%	62.54%
FIJI	1	0.03%	62.57%
INDONESIA	21	0.72%	63.30%
INDIA	95	3.27%	66.56%
SRI LANKA	6	0.21%	66.77%
LAOS	2	0.07%	66.84%
NEPAL	1	0.03%	66.87%
PAKISTAN	33	1.14%	68.01%
PHILIPPINES	105	3.61%	71.62%
THAILAND	2	0.07%	71.69%
EAST TIMOR	2	0.07%	71.76%
TONGA	1	0.03%	71.79%
VIETNAM	6	0.21%	72.00%
SAMOA	1	0.03%	72.03%
South East Asia (SEA)	368	12.66%	72.03%
Unclassified	813	27.97%	100.00%
Total	2907	100.00%	100.00%

Descriptive Statistics on Total Observations

	Obs.	Mean	Std. Dev.
Gross Loan Portfolio USD	986	5.11E+07	4.51E+08
Age (years)	733	12.91132	8.267657
Young MFI (<11 Years)	2907	0.101823	0.302468
Old MFI (11+ Years)	2907	0.150327	0.357453
ROE (%)	1581	0.061447	0.675357
ROA (%)	1783	0.053271	0.274444
OER (%)	1435	0.335663	1.803116
PAR 30 (%)	1871	0.079087	0.508723
Transparency (0-1)	2688	0.671303	0.328633
Complaints (0-1)	2612	0.524627	0.354568
Privacy (0-1)	1902	0.556575	0.327085
Ethics (0-1)	1545	0.621936	0.411877
Over-indebtedness (0-1)	2892	0.605557	0.364054
Debt-collection (0-1)	2455	0.560461	0.370513

Our econometric representation is given by equation:

$$FI_{it} = \sum_{k=1}^{10} \lambda_k + \alpha_t + \eta_j SI_{jit} + \varphi_j SI_{jit}^2 + \omega D_{young} + \delta D_{old} + \varepsilon_{it}, \ i = 1, 2, ..., N, \ t = 1, 2, ..., T \qquad (1)$$

where FI_{it} includes a set of financial indicators (ROE, ROA, OER and PAR 30) for MFI i at time t. We control for heterogeneity across data providers by using a dummy variable for each data provider, λ_k. α_t is a year effect which captures business cycle fluctuations. SI_{it} includes six different measures of client protection (transparency, complaints, privacy, ethics, over-indebtedness and debt-collection). We also include SI-squared terms (SI_{it}^2) in some of the empirical specifications to capture nonlinearities in the effect of client protection indicators on financial performance. D_{young} and D_{old} are two dummy variables which capture the age of the MFI. D_{young} is 1 if the MFI i is < 11 years and D_{old} is 1 if MFI i is ≥ 11 years. ω, δ, η_j and φ_j are the estimated parameters of interest, and ε_{it} is the contemporaneous error term.

Estimates of equation (1) are obtained using pooled ordinary least squares (OLS). All of the reported models use Huber-White standard errors which account for heteroskedasticity

Table 1A. Return on Equity (ROE) (%)

	Model A	Model B	Model C	Model D	Model E	Model F
Young MFI	-0.0473 (0.0986)	-0.0212 (0.0987)	-0.0677 (0.106)	-0.0304 (0.104)	0.00145 (0.0996)	0.00541 (0.0995)
Old MFI	-0.0206 (0.0923)	-0.00195 (0.0919)	0.0118 (0.0987)	-0.00784 (0.0947)	0.0276 (0.0923)	0.0316 (0.0919)
Transparency	0.0553 (0.0553)					
Complaints and Transparency		0.216** (0.110)				
Privacy			-0.0192 (0.0956)			
Ethics				0.174* (0.0953)		
Indebtness					0.0188 (0.0689)	
Debt-Collection						0.0624 (0.0825)
Constant	0.204*** (0.0648)	-0.163 (0.140)	0.158*** (0.0583)	0.00960 (0.0763)	0.0363 (0.139)	-0.0841 (0.134)
Observations	1277	1204	1113	678	1407	1381
Adjusted R^2	0.001	0.006	-0.001	-0.004	0.002	0.002
ll	-1346.2	-1297.0	-1220.0	-879.9	-1509.5	-1494.1
r2	0.0128	0.0188	0.0116	0.0170	0.0122	0.0125

Standard errors in parentheses

Note: All models include year dummies. Robust standard errors in parentheses. Non-reported covariates were automatically dropped due to perfect collinearity.

*$p < 0.10$, **$p < 0.05$, ***$p < 0.01$*

Table 1B. Return on Equity (ROE) (%)

	Model A	Model B	Model C	Model D	Model E	Model F
Young MFI	-0.0875 (0.103)	-0.0196 (0.0989)	-0.0292 (0.102)	-0.0247 (0.101)	0.0181 (0.103)	0.000886 (0.102)
Old MFI	-0.0592 (0.0967)	-0.000555 (0.0922)	0.0434 (0.0969)	-0.00141 (0.0936)	0.0469 (0.0926)	0.0258 (0.0929)
Transparency	-0.225 (0.214)					
Transparency^2	0.257 (0.180)					
Complaints and Transparency		0.235 (0.197)				
Complaints and Transparency^2		-0.0186 (0.147)				
Privacy			-0.241* (0.128)			
Privacy^2			0.229 (0.144)			
Ethics				-0.0582 (0.334)		
Ethics^2				0.230 (0.301)		
Indebtness					0.171 (0.142)	
Indebtness^2					-0.151 (0.123)	
Debt-Collection						0.00840 (0.179)
Debt-Collection^2						0.0536 (0.139)
Constant	0.273*** (0.0803)	-0.166 (0.145)	0.202*** (0.0568)	0.0979 (0.145)	0.00580 (0.144)	-0.0717 (0.149)
Observations	1277	1204	1113	678	1407	1381
Adjusted R2	0.001	0.006	-0.002	-0.005	0.001	0.002
ll	-1345.8	-1297.0	-1219.8	-879.8	-1509.4	-1494.1
r2	0.0133	0.0188	0.0120	0.0172	0.0124	0.0126

Standard errors in parentheses

Note: All models include year dummies. Robust standard errors in parentheses. Non-reported covariates were automatically dropped due to perfect collinearity.

*$p < 0.10$, ** $p < 0.05$, *** $p < 0.01$*

Table 2A. Return on Assets (ROA) (%)

	Model A	Model B	Model C	Model D	Model E	Model F
Young MFI	0.0422 (0.0406)	0.0599 (0.0452)	0.0368 (0.0491)	0.0764 (0.0712)	0.0657 (0.0436)	0.0648 (0.0439)
Old MFI	0.0164 (0.0264)	0.0380 (0.0297)	0.0162 (0.0324)	0.0609 (0.0589)	0.0430 (0.0271)	0.0445 (0.0274)
Transparency	0.0780** (0.0383)					
Complaints and Transparency		0.0180 (0.0205)				
Privacy			0.0572*** (0.0219)			
Ethics				0.00770 (0.0288)		
Indebtness					0.000952 (0.0204)	
Debt-Collection						0.0389* (0.0205)
Constant	-0.00670 (0.0305)	-0.0455 (0.0363)	-0.00803 (0.0447)	-0.108* (0.0644)	0.0499 (0.0359)	-0.0834** (0.0405)
Observations	1475	1404	1310	876	1606	1579
Adjusted R^2	0.025	0.020	0.020	0.014	0.023	0.025
ll	-273.0	-295.5	-316.7	-235.3	-253.5	-258.5
r2	0.0348	0.0310	0.0309	0.0296	0.0318	0.0337

Standard errors in parentheses

Note: All models include year dummies. Robust standard errors in parentheses. Non-reported covariates were automatically dropped due to perfect collinearity.

*p < 0.10, ** p < 0.05, *** p < 0.01*

Table 2B. Return on Assets (ROA) (%)

	Model A	Model B	Model C	Model D	Model E	Model F
Young MFI	0.0203 (0.0498)	0.0426 (0.0502)	0.0358 (0.0452)	0.0816 (0.0705)	0.0682* (0.0371)	0.0503 (0.0474)
Old MFI	-0.00582 (0.0414)	0.0280 (0.0396)	0.0154 (0.0328)	0.0653 (0.0606)	0.0460 (0.0344)	0.0288 (0.0281)
Transparency	-0.320** (0.126)					
Transparency^2	0.359*** (0.135)					
Complaints and Transparency		-0.321* (0.169)				
Complaints and Transparency^2		0.363** (0.154)				
Privacy			0.0630 (0.104)			
Privacy^2			-0.00619 (0.106)			
Ethics				-0.119 (0.199)		
Ethics^2				0.128 (0.182)		
Indebtness					0.0254 (0.135)	
Indebtness^2					-0.0240 (0.131)	
Debt-Collection						-0.0984 (0.0971)
Debt-Collection^2						0.134 (0.0959)
Constant	0.0932** (0.0361)	-0.0480 (0.0361)	-0.00857 (0.0481)	-0.118* (0.0657)	0.0482 (0.0372)	-0.0475 (0.0428)
Observations	1475	1404	1310	876	1606	1579
Adjusted R2	0.032	0.028	0.020	0.014	0.022	0.026
ll	-267.4	-289.8	-316.7	-234.9	-253.5	-257.4
r2	0.0421	0.0388	0.0309	0.0305	0.0318	0.0349

Standard errors in parentheses

Note: All models include year dummies. Robust standard errors in parentheses. Non-reported covariates were automatically dropped due to perfect collinearity.

$* \ p < 0.10, \ ** \ p < 0.05, \ *** \ p < 0.01$

Table 3A. Operating Expense Ratio (OER) (%)

	Model A	Model B	Model C	Model D	Model E	Model F
Young MFI	0.374* (0.203)	0.305 (0.215)	0.465* (0.252)	0.393 (0.324)	0.499* (0.286)	0.431 (0.275)
Old MFI	0.357 (0.290)	0.237 (0.177)	0.471 (0.338)	0.371 (0.350)	0.476* (0.272)	0.424* (0.256)
Transparency	0.233 (0.359)					
Complaints and Transparency		-0.478* (0.246)				
Privacy			-0.107 (0.369)			
Ethics				-0.125 (0.240)		
Indebtness					0.562* (0.331)	
Debt-Collection						0.0654 (0.397)
Constant	-0.412 (0.341)	0.191* (0.0988)	-0.111 (0.173)	-0.978 (0.729)	-0.612 (0.500)	0.147 (0.312)
Observations	1261	1262	1044	602	1262	1109
Adjusted R^2	0.001	0.003	-0.000	-0.003	0.006	0.001
ll	-2604.8	-2511.4	-2254.5	-1462.4	-2603.3	-2361.8
r2	0.0126	0.0148	0.0114	0.0186	0.0174	0.0114

Standard errors in parentheses

Note: All models include year dummies. Robust standard errors in parentheses. Non-reported covariates were automatically dropped due to perfect collinearity.

*$p < 0.10$, **$p < 0.05$, ***$p < 0.01$

Table 3B. Operating Expense Ratio (OER) (%)

	Model A	Model B	Model C	Model D	Model E	Model F
Young MFI	0.370** (0.183)	0.229 (0.190)	0.411 (0.266)	0.373 (0.304)	0.484* (0.272)	0.340 (0.263)
Old MFI	0.354 (0.321)	0.189 (0.168)	0.422 (0.389)	0.350 (0.354)	0.458 (0.307)	0.324 (0.272)
Transparency	0.158 (0.745)					
Transparency^2	0.0658 (0.919)					
Complaints and Transparency		-2.081* (1.203)				
Complaints and Transparency^2		1.576* (0.943)				
Privacy			0.288 (1.080)			
Privacy^2			-0.478 (0.864)			
Ethics				0.600 (1.462)		
Ethics^2				-0.720 (1.304)		
Indebtness					0.418 (0.517)	
Indebtness^2					0.134 (0.647)	
Debt-Collection						-0.841 (1.029)
Debt-Collection^2						0.864 (0.842)
Constant	-0.395 (0.304)	0.361** (0.170)	-0.168 (0.183)	-1.111 (0.679)	-0.597 (0.457)	0.372 (0.444)
Observations	1261	1262	1044	602	1262	1109
Adjusted R2	-0.000	0.008	-0.001	-0.004	0.005	0.001
ll	-2604.8	-2507.6	-2254.3	-1462.2	-2603.2	-2361.0
r2	0.0126	0.0207	0.0117	0.0192	0.0175	0.0128

Standard errors in parentheses

Note: All models include year dummies. Robust standard errors in parentheses. Non-reported covariates were automatically dropped due to perfect collinearity.

*$p < 0.10$, **$p < 0.05$, ***$p < 0.01$*

Table 4A. Portfolio at Risk greater than 30 Days (PAR) (%)

	Model A	Model B	Model C	Model D	Model E	Model F
Young MFI	0.190** (0.0922)	0.208** (0.104)	0.197* (0.104)	0.290* (0.152)	0.187* (0.0964)	0.182* (0.0993)
Old MFI	0.238** (0.0995)	0.263** (0.112)	0.269** (0.111)	0.359** (0.159)	0.244** (0.102)	0.243** (0.101)
Transparency	0.120* (0.0679)					
Complaints and Transparency		-0.0168 (0.0252)				
Privacy			0.0324 (0.0322)			
Ethics				-0.0144 (0.0546)		
Indebtness					-0.00475 (0.0413)	
Debt-Collection						-0.0330* (0.0170)
Constant	-0.236** (0.110)	0.107** (0.0481)	0.0834** (0.0350)	-0.407** (0.202)	0.00323 (0.0889)	0.102*** (0.0345)
Observations	1563	1493	1273	901	1694	1542
Adjusted R^2	0.017	0.012	0.014	0.016	0.013	0.014
ll	-1277.7	-1255.7	-1170.0	-977.2	-1321.7	-1273.1
r2	0.0277	0.0233	0.0245	0.0321	0.0229	0.0230

Standard errors in parentheses

Note: All models include year dummies. Robust standard errors in parentheses. Non-reported covariates were automatically dropped due to perfect collinearity.

*p < 0.10, ** p < 0.05, *** p < 0.01*

Table 4B. Portfolio at Risk greater than 30 Days (PAR) (%)

	Model A	Model B	Model C	Model D	Model E	Model F
Young MFI	0.167** (0.0843)	0.209** (0.100)	0.123 (0.0875)	0.288* (0.157)	0.175* (0.0909)	0.226* (0.120)
Old MFI	0.214** (0.0962)	0.264** (0.115)	0.201** (0.0873)	0.357** (0.161)	0.230* (0.118)	0.293** (0.128)
Transparency	-0.231 (0.186)					
Transparency^2	0.319 (0.218)					
Complaints and Transparency		0.0156 (0.257)				
Complaints and Transparency^2		-0.0321 (0.231)				
Privacy			0.487* (0.273)			
Privacy^2			-0.486* (0.260)			
Ethics				0.0435 (0.282)		
Ethics^2				-0.0575 (0.266)		
Indebtness					-0.118 (0.305)	
Indebtness^2					0.110 (0.277)	
Debt-Collection						0.406 (0.292)
Debt-Collection^2						-0.430 (0.280)
Constant	-0.161* (0.0852)	0.106** (0.0502)	0.0416 (0.0387)	-0.399* (0.206)	0.0128 (0.0910)	0.0775** (0.0302)
Observations	1563	1493	1273	901	1694	1542
Adjusted R2	0.018	0.011	0.016	0.015	0.013	0.017
ll	-1276.4	-1255.7	-1168.0	-977.2	-1321.5	-1270.4
r2	0.0293	0.0233	0.0275	0.0321	0.0232	0.0264

Standard errors in parentheses

Note: All models include year dummies. Robust standard errors in parentheses. Non-reported covariates were automatically dropped due to perfect collinearity.

*$p < 0.10$, ** $p < 0.05$, *** $p < 0.01$*

NOTES

NOTES

www.e-mfp.eu