# A new European microfinance panel data set: The European Microfinance Network survey 2006-2015

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Since 2004, with the aim to provide a consistent picture of the European microfinance sector, the European Microfinance Network (EMN) carried out, on a biennial basis, a survey of microfinance institutions (MFIs) in Europe. The MFIs surveyed by EMN self-report data mainly about their mission, target, social and financial impact; an overview of the main results of these surveys are reported on EMN overview publications[1]. The surveys covered a growing and changing group of participants in terms of institutional types and geographical coverage (from 394 microlenders from 16 European countries in 2006 to 195 institutions from 29 countries in 2014) through a survey questionnaire subject to adjustments throughout the different editions. The last survey (run in 2016 with reference to the years 2014-2015) has been jointly managed by the EMN and the Microfinance Center (MFC[2]) and it included a wider participation of Eastern European MFIs members of the MFC. The significant volatility of observed institutions, questionnaire structure, and variables definition undermined so far the quality and comparability of collected data and prevented to conduct a comprehensive analysis of European MFIs' performance through time. As a result, available quantitative analyses on the European microfinance landscape are mostly cross-sectional, focusing on single survey wave data (Botti et al., 2017; Balkenhol, 2015; Botti and Corsi, 2011; Kraemer-Eis and Conforti, 2009; Mark and Tilleben, 2007). After an important stage of matching all the information from the various waves and an intensive data mining activity, we succeeded in building an original panel dataset for 2006-2015 based on the EMN surveys data and adjusted to improve comparability across different editions. The revision process of available data mostly involved the harmonization of key variables and data cleaning. The creation of this new dataset gives the opportunities to identify trends in the European microfinance landscape with reference to some key variables regularly collected along the 2006-2015 time span. In this paper, we provide both a methodological note to detail on our data adjustment work and a preliminary data analysis to offer examples of how this dataset can be used for studying recent evolution of the microfinance sector in Europe.

1. EMN overview survey are available at: http://www.european-microfinance.org/index.php?rub=publications&pg=microfinance-overview-surveys
2. For info about the Microfinance Centre please visit the website: http://mfc.org.pl/

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# 1. The European microfinance sector in the last decade (2006-2015): data and trends

The European microfinance landscape has been described so far as a relatively young and heterogeneous sector involving a wide range of institutional size, legal forms and targets (Botti et al., 2017). With the aim to encourage the provision of a more consistent and rigorous representation of the recent developments of the European sector, we present in the following sections the data cleaning and revision process, the set of revised variables in the proposed panel dataset, and a preliminary descriptive analysis according to four specific focuses: key institutional characteristics, outreach, social performance and financial performance. In the panel dataset are included 444 MFIs for the period 2006-2015, 34 of which are observed at least across 8 years in the reference time interval (only 12 of them participated to all the survey editions). Revised variables were incorporated in the panel dataset only if available at least in two of the last three survey editions, assuming they more likely will be collected in following survey questionnaires. Consistently, variables appearing only in the first 3 survey waves have been ignored. Variables denominations and descriptions are provided in Annex 1. The countries that we cover are: Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Macedonia (FYR), Malta, Moldova, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, United Kingdom (the geographical distribution of participating MFIs in the dataset is presented in Fig. 1).



Figure 1

Geographical Coverage

- 1 MFI
- 2 MFIs
- 3-5 MFIs
- 6-10 MFIs
- 11-25 MFIs
- 26-50 MFIs
- 51-65 MFIs
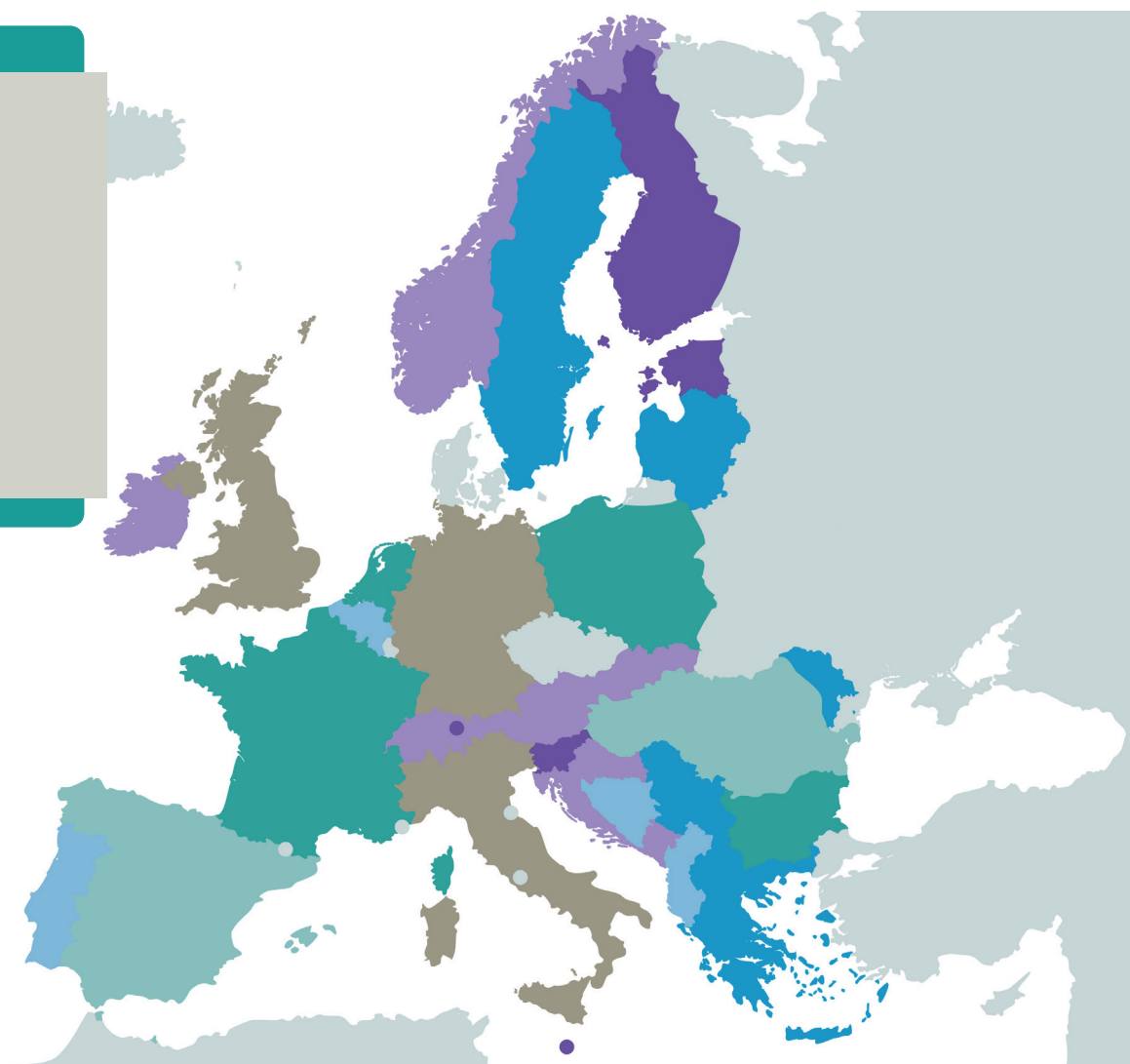
# 1.1 Key institutional characteristics

The EMN survey questionnaires regularly collected data on MFIs legal form, year of starting operation, staff issues and focus on microcredit. Indicators of institutional age and share of microlending on the overall business activity (in terms of turnover) have not been revised across survey waves. Substantial changes concerned the selection and the configuration of reference indicators for institutional type and staff. The variable for respondents' institutional type (the variable label in the attached dataset is the following: [*instype*]; henceforth, we refer to variables labels by using italic within brackets) allows for four possible categories of answers: Bank, Government Body, Non-Bank Financial Institution (NBFI) and Non Governmental Organization (NGO). Additional specifications provided in different survey questionnaires have been included in the previous categories according to the following criteria: Non-Savings and Loans Association, Development Bank, Savings Bank (2006/07, 2008/09 survey editions), Credit unions/ Cooperatives (2008/09, 2010/11, 2012/13, and 2014/15) are integrated in the "Bank" category; Foundations (2006/07), Microfinance Associations, Community Development Financial Institutions (CDFI) and Religious institutions (2010/11, 2012/13) are considered as "NGO". The collection of data on the size and composition of paid staff employed evolved over the different survey waves [*staf_equiv*]. The total number of full-time equivalent (FTE) paid staff is explicitly reported for surveyed MFIs in 2012/13 and 2014/15. While in the previous editions, the corresponding figures only refer to full-time loan officers and it possibly underestimate the size of FTE staff employed by MFIs. To give more emphasis on the gender dimension of the MFIs staff, we computed the variable [*staff_w*] that indicates the share of women on total staff. It is computed on the total number of staff employed for 2006/07 and 2008/09 (gender shares are not available in 2010/11 survey questionnaire), while it refers to the percentage of women FTE staff in the last two editions.

**Table 1**

Main institutional characteristics (2006-2015)

| | 2006/07 | 2008/09 | 2010/11 | 2012/13 | 2014/15 |
|---|---|---|---|---|---|
| Survey participants (No.) | 94 | 170 | 147 | 149 | 195 |
| **Institutional type (%)** | | | | | |
| Bank | 14.6% | 20.0% | 23.8% | 23.5% | 11.4% |
| Government body | 18.0% | 11.8% | 3.4% | 6.0% | 3.2% |
| Non-Bank Financial Institution | 11.2% | 19.4% | 23.1% | 30.2% | 53.5% |
| NGOs | 56.2% | 48.8% | 49.7% | 40.3% | 31.9% |
| **Staff** | | | | | |
| Paid staff (No.) | 13.5 | 10.7 | 34.4 | 42.0 | 54.5 |
| Women staff (%) | 56.8% | 62.2% | na | 60.2% | 62.6% |

Source: EMN surveys panel dataset 2006-2015

The number of survey participants almost constantly increased during the reference time interval. In terms of their legal form, survey participants have been growingly dominated by NBFIs and NGOs, with the latter type showing a recent declining trend. The average size of staff remarkably expanded across survey waves, showing a stable preferential use of women employees.

# 1.2   Outreach

Standard indicators of the size of microlending activities and common measures of MFIs breadth of outreach have been consistently collected during the time interval 2006-2015, namely: the gross microloan portfolio outstanding [*glp*], the total number of active borrowers [*act_borrowers*], the total number and amount of loans yearly disbursed [*nloans*] and [*valueloans*]. Two measures of loan terms and conditions are also available throughout the survey years: the current average annual interest rate (the Average Percentage Rate, [*interest_rate*]) and current average loan term expressed in months [*loan_term_avg*][3] . The outreach of European surveyed MFIs expanded since 2006 in terms of both total aggregate number and amount of microloans annually disbursed, as well as in terms of average size of microcredit managed during a year (see figure 2). The pattern of observed loan portfolios and active borrowers has been more erratic and especially after 2010, possibly due to the effect of the crisis.

## Figure 2. Evolution of microfinance sector's outreach in Europe (2006-2015)
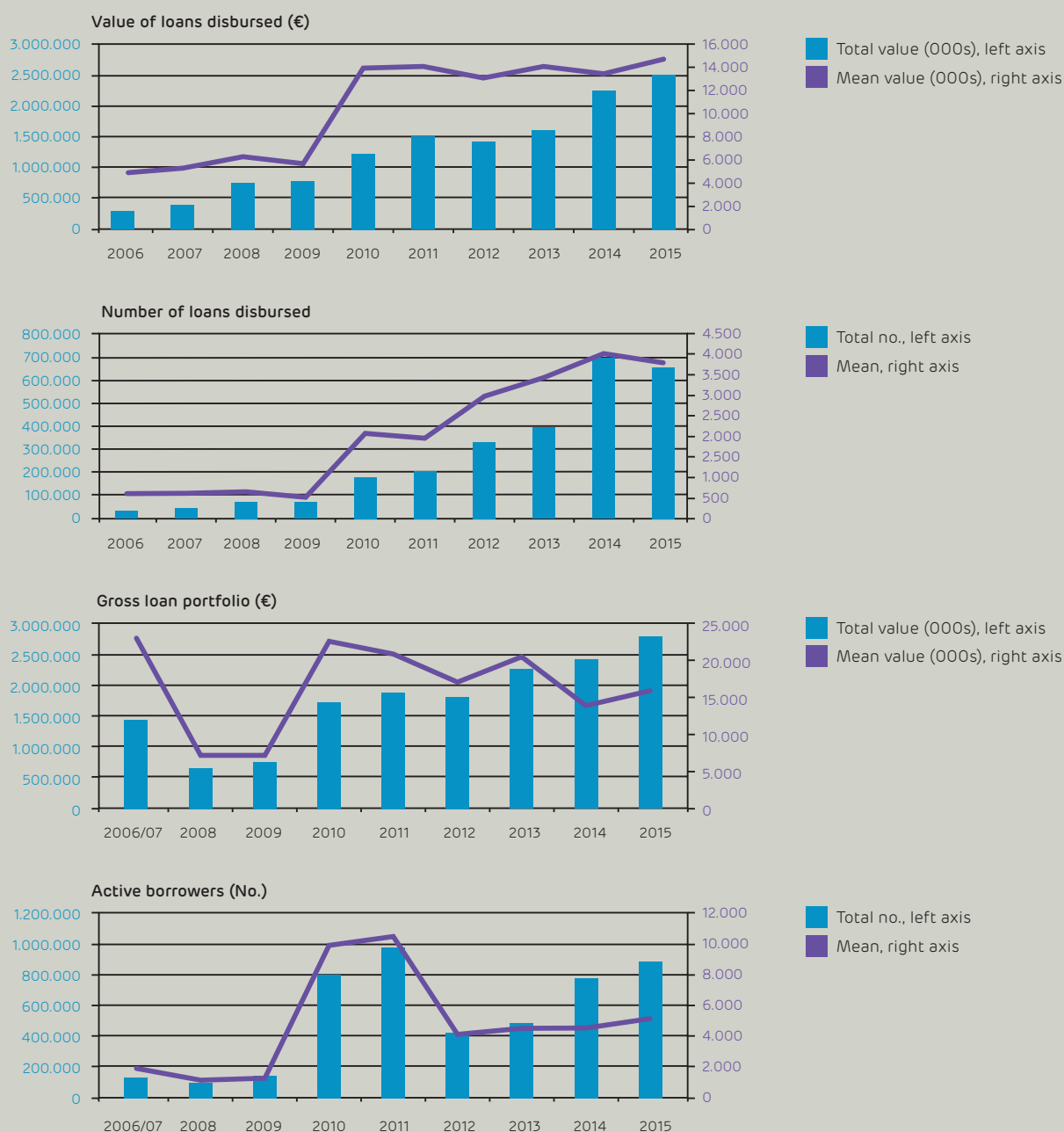


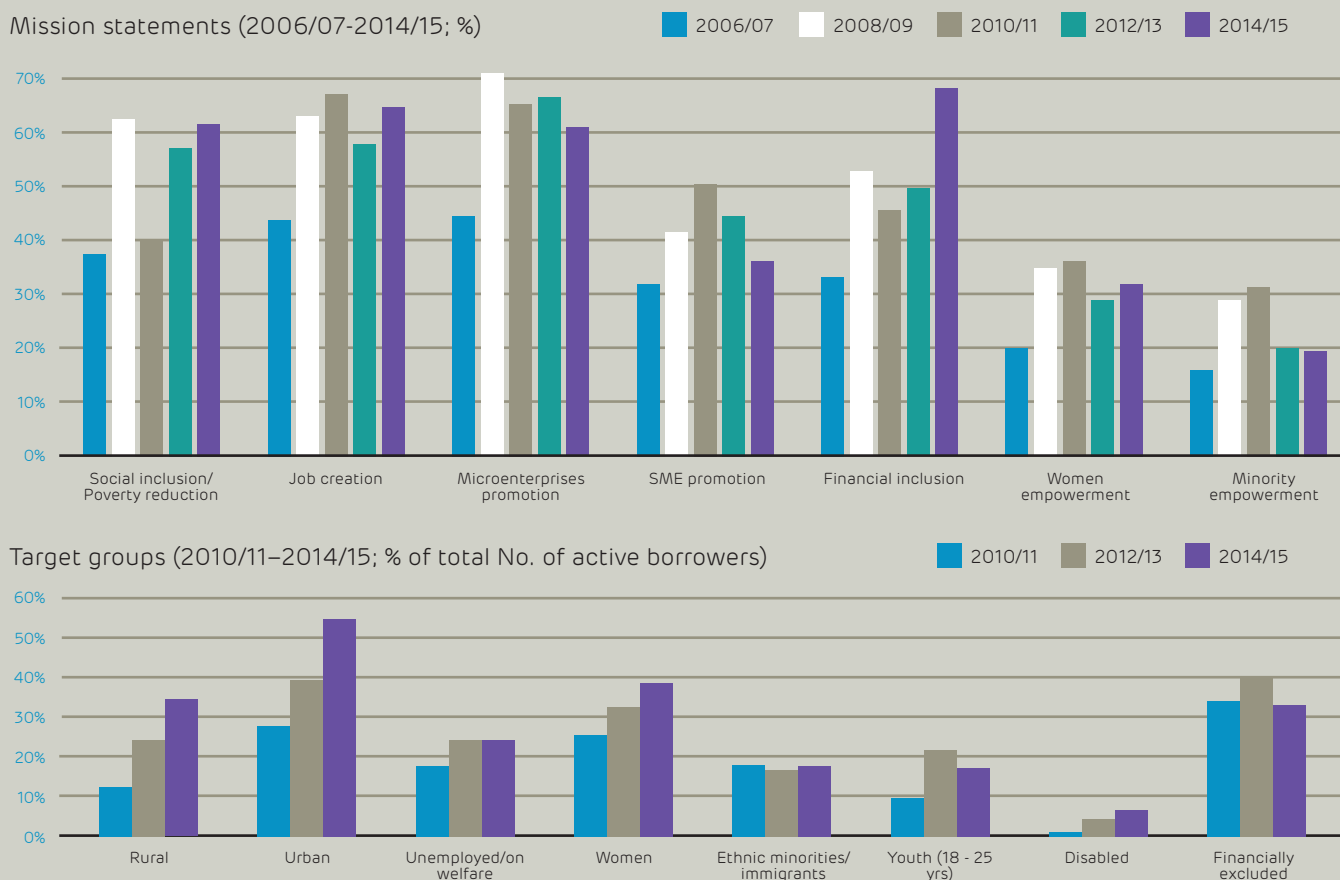Source: EMN surveys panel dataset 2006-2015

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3.  The current average loan term for the years 2012-2015 is computed as an average business and personal microloans terms.

# 1.3 Social performance

Even if EMN have not complied so far with the collection practices promoted by the Social Performance Task Force through the Universal Standards for Social Performance Management (Social Performance Task Force, 2016), a set of social performance core indicators have been collected across the survey editions. For the investigation of specific social aspects of European MFIs performance we refer to: mission, target groups, and type of enterprises supported. Surveyed institutions described their mission according to seven predefined categories, allowing for multiple options (in the dataset, mission is described by dummy variables): "Social inclusion and poverty reduction", "Job creation", "Microenterprise promotion", "SME promotion", "Financial inclusion", "Women empowerment", and "Minority empowerment". The open answers available for 2006/07 have been arranged in one of the corresponding category reported above. The "Youth employment" option, introduced in 2014/15, has been ignored. For each investigated survey wave, the participants self-report their microlending target group amongst a set of proposed categories: "Rural population", "Urban population", "Unemployed people or people on welfare",

"Women", "Ethnic minorities and/or immigrants", "Youth (18-25 years old)", "Disabled people", and "People excluded from mainstream financial services". The share of each target group category on the total number of active borrowers is available only for the last 3 survey editions (2010-2015). The type of business served by surveyed MFIs is also reported according to selected categories: "Informal business/unregistered businesses", "Entrepreneurs in the pre-start-up phase", "Start-up enterprises", "Registered businesses with less than 5 employees", "Registered businesses with 6-9 employees", "Self-employed without employees", and "Social enterprises". Only business categories proposed in at least the last 3 EMN surveys waves are included in the panel dataset. The share of each business category on the total number of microloans disbursed for business purpose is available only for the last 3 survey editions (2010-2015). Surveyed MFIs mission mostly focused on microenterprises promotion and job creation, with financial inclusion increasingly gaining importance in European MFIs strategies (Fig. 2). The actual target groups served by observed actors have been predominantly those financially excluded from mainstream financial markets in urban areas (Fig. 3).



Figure 3. Evolution of microfinance social performance in Europe (2006-2015)

Mission statements (2006/07-2014/15; %)

Legend: 2006/07, 2008/09, 2010/11, 2012/13, 2014/15

Target groups (2010/11–2014/15; % of total No. of active borrowers)

Legend: 2010/11, 2012/13, 2014/15

Source: EMN surveys panel dataset 2006-2015.
Notes: Survey participants' multiple answers were allowed in the questionnaire. Data on the share of target groups on the total number of active borrowers have been systematically collected only since 2010.

# 1.4 Financial performance

The financial performance of European surveyed MFIs has been explored through a changing set of reference indicators across the different EMN survey waves. Despite a relatively low response rate, a subset of core standard financial performance indicators have been collected consistently: the Portfolio at Risk (PAR30, [*par30*], Write-off ratio [*writeoff*], Portfolio yield [*portfolio_yield*], Debt to equity ratio [*debt_equity*], Operating expenses ratio [*op_exp_ratio*], Return On Assets (ROA, [*roa*]), Return On Equity (ROE, [*roe*]), and the Operational Self-Sufficiency ratio (OSS, [*oss*]) (see Table 2 for financial performance indicators description).

## Table 2. Financial performance indicators

| | |
|---|---|
| Portfolio at Risk > 30 days (PAR30) | The value of all loans outstanding that have one or more instalments of principal past due more than 30 days. |
| Write-Off Ratio | The value of Loans Written-Off /Average Gross Loan Portfolio |
| Operating expenses ratio | Operating Expenses / Average Gross Loan Portfolio |
| Debt to equity ratio | Liabilities / Equity |
| Portfolio yield | Financial Revenues from Loan Portfolio (Interest and Fees) / Average Gross Loan Portfolio |
| Return on Assets (ROA) | (Net Operating Income - Taxes) / Average Total Assets |
| Return on Equity (ROE) | (Net Operating Income - Taxes) / Average Total Equity |
| Operational Sef-Sufficiency (OSS) | [Operating Revenue / (Financial Expense + Loan Loss Provision Expense + Operating Expense)] |

Source: Mix Market Glossary - https://www.themix.org/resources/glossary; European Code of Good Conduct for Microcredit Provision – Version 2.0, June 2013

Despite the above-mentioned changes in the group of respondents, it is worth to indicate an overall improvement of portfolio quality (declining PAR30 and Write-off ratio), cost-efficiency of microlending activity (decreasing operating expense ratio), and operational sustainability (increasing OSS) across the different survey editions. In the same period, available data show a progressive worsening of common measures of profitability (ROE and ROA) and of the capacity to generate revenues from microloan portfolio (portfolio yield).

## Table 3. Evolution of microfinance financial performance indicators in Europe (2006-2015)

| | 2006-07 | 2008-09 | 2010-11 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|
| PAR30 | 13.9% | 19.4% | 11.4% | 10.7% | 11.2% | 10.8% | 10.2% |
| Write-off ratio | 5.8% | 3.5% | 5.5% | 2.1% | 2.1% | 5.1% | 4.8% |
| Portfolio yield | 14.3% | 12.1% | 16.4% | 14.9% | 14.7% | 14.3% | 14.3% |
| Debt to equity ratio | 113.5% | 149.9% | 67% | 60% | 66.4% | 201% | 181.2% |
| Operating expense ratio | 23.8% | 15.7% | 25.5% | 26.2% | 18.2% | 16.5% | 16.2% |
| ROE | na | 13.1% | 12% | na | na | 3.1% | 5.9% |
| ROA | na | 12.5% | 6.7% | 10.2% | 8.2% | 3.0% | 3.1% |
| OSS | 79.7% | 99.8% | na | 95.7% | 97.1% | 92.7% | 90.9% |

Source: EMN surveys panel dataset 2006-2015.

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| Name | Description | Details |
|---|---|---|
| **Key institutional characteristics** | | |
| id_no | Identification number to track each observation | Number |
| wave | Biannual survey edition | 2006/07-2014/15 |
| wave_year | Data reference year | 2006-2015 |
| country | Country location | Country code |
| year_found | What year has your institution started operating in microfinance? | Calendar year |
| instype | Legal form | Dummy variable: 1. Bank 2. Government body 3. NBFI 4. NGO |
| staff_equiv | Paid staff full-time equivalent (FTE) | Total number |
| staff_w | Share of women staff | Percentage (%) |
| mc_share | Microlending as % of business activity (in terms of turnover) | Dummy variable: 1. ≤ 5% 2. 6-25% 3. 26-50% 4. 51-75% 5. 76-100% |
| **Outreach** | | |
| nloans | Microloans disbursed during the reference year | Total number |
| valueloans | Microloans disbursed during the reference year | Amount (€) |
| act_borrowers | Active borrowers | Total number |
| glp | Gross loan portfolio | Amount (€) |
| loan_term_avg | Current average loan term | Total number of months |
| interest_rate | Current annual interest rate (Average Percentage Rate, APR) not including additional fees. | Percentage (%) |
| **Social performance** | | |
| mission_si_poverty | Social inclusion and poverty reduction | Dummy variable (0, 1) |
| misson_jobcreate | Job creation | |
| mission_microent | Microenterprise promotion | |
| mission_sme | SME promotion | |
| mission_fi | Financial inclusion | |
| mission_w | Women empowerment | |
| mission_minority | Minorty empowerment | |
| business_informal | Which type of businesses do you lend to? | Dummy variable (0, 1) |
| business_prestartup | | |
| business_startup | | |
| business_less5 | | |
| business_5to9 | | |
| business_socialenter | | |
| businessshare_informal | Which type of businesses do you lend to? | Percentage (%) |
| businessshare_prestartup | | |
| businessshare_startup | | |
| businessshare_less5 | | |
| businessshare_5to9 | | |
| businessshare_socialenter | | |

| | | |
|---|---|---|
| target_rural | | Dummy variable (0, 1) |
| target_urban | | |
| target_unemployed | | |
| target_women | | |
| target_migrants | Target groups served in microlending | |
| target_youth | | |
| target_disabled | | |
| target_finexcluded | | |
| target_nospecific | | |
| targetshare_rural | | Percentage (%) |
| targetshare_urban | | |
| targetshare_unemployed | | |
| targetshare_women | | |
| targetshare_migrants | Target groups served in microlending | |
| targetshare_youth | | |
| targetshare_disabled | | |
| targetshare_finexcluded | | |
| targetshare_nospecific | | |
| **Financial performance** | | |
| par30 | Portfolio at Risk > 30 days: the value of all loans outstanding that have one or more installments of principal past due more than 30 days. | Percentage (%) |
| writeoff | Write-Off Ratio: value of Loans Written-Off /Average Gross Loan Portfolio | Percentage (%) |
| op_exp_ratio | Operating Expenses / Average Gross Loan Portfolio | Percentage (%) |
| debt_equity | Debt to Equity Ratio: Liabilities / Equity | Percentage (%) |
| portfolio_yield | Financial Revenues from Loan Portfolio (Interest and Fees) / Average Gross Loan Portfolio | Percentage (%) |
| roa | (Net Operating Income - Taxes) / Average Total Assets | Percentage (%) |
| roe | (Net Operating Income - Taxes) / Average Total Equity | Percentage (%) |
| oss | Operational Sef-Sufficiency: [Operating Revenue / (Financial Expense + Loan Loss Provision Expense + Operating Expense)] | Percentage (%) |