UNDERSTANDING MICROFINANCE INTEREST RATES IN AGRIFOOD
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Frank Hollinger

Food and Agriculture Organization of the United Nations
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## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Meaning</th>
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<tbody>
<tr>
<td>APR</td>
<td>Annual Percentage Rate</td>
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<tr>
<td>CFI</td>
<td>Center for Financial Inclusion</td>
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<tr>
<td>CPS</td>
<td>Client Protection Standards</td>
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<tr>
<td>CRB</td>
<td>Credit Reference Bureau</td>
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<tr>
<td>DD</td>
<td>due diligence</td>
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<tr>
<td>DFI</td>
<td>development finance institution</td>
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<td>EIR</td>
<td>Effective Interest Rate</td>
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<td>FAO</td>
<td>Food and Agriculture Organization of the United Nations</td>
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<tr>
<td>GLP</td>
<td>gross loan portfolio</td>
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<td>GNI</td>
<td>gross national income</td>
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<tr>
<td>IFIs</td>
<td>international financing institutions</td>
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<tr>
<td>IPO</td>
<td>initial public offering</td>
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<tr>
<td>IT</td>
<td>information technology</td>
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<tr>
<td>LLER</td>
<td>Loan Loss Expense Ratio</td>
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<tr>
<td>MFI</td>
<td>microfinance institution</td>
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<td>MFT</td>
<td>MicroFinance Transparency</td>
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<td>MIX</td>
<td>Microfinance Information Exchange</td>
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<td>NBFI</td>
<td>non-bank financial institution</td>
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<td>NENA</td>
<td>NENA</td>
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<tr>
<td>NGO</td>
<td>non-governmental organization</td>
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<tr>
<td>OER</td>
<td>Operating Expense Ratio</td>
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<tr>
<td>PAR</td>
<td>Portfolio at Risk</td>
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<tr>
<td>SPTF</td>
<td>Social Performance Task Force</td>
</tr>
<tr>
<td>ROA</td>
<td>Return on Assets</td>
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<td>ROE</td>
<td>Return on Equity</td>
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Executive Summary

Interest rates remain a key issue in microfinance. Asking poor borrowers to pay higher interest rates than their wealthier peers seems, at first sight, counterintuitive and inconsistent with the social mission. Furthermore, this issue is especially relevant to the impact investors such as impact investment funds and development finance institutions (DFIs) funding microfinance institutions (MFIs) to expand their lending to smallholder farmers and other micro-borrowers in the agrifood system. While higher interest rates of microloans are often justified by the underlying costs of making small loans in rural areas, this is not always the case. Hence, beyond generalized statements and perceptions, a closer look at the cost and pricing structure of individual MFIs is needed to judge whether these are justified.

This Toolkit provides guidance on how to analyse interest rates of MFIs from a responsible lending perspective and how to strengthen responsible lending practices more broadly. It is mainly targeted at impact investors and other financiers with a double-bottom line (such as DFIs) investing in MFIs as part of their broader development and impact mandates. The Toolkit may also be useful for a broader audience concerned with micro- and agricultural finance and rural development, including international financing institutions (IFIs) and other development practitioners. It mainly draws on literature and available secondary data including from the Microfinance Information Exchange (MIX) Market database and the work of MFTransparency.

Interest rates are a complex function of various cost components and market conditions. The main cost components reflected in interest rates are costs of funds, operating costs, loan-loss provisions, and profits. The largest cost item of MFIs are operating costs which typically account for 50 percent or more of total lending costs. This is mainly due to the high cost of making small loans and the unit cost economics of lending. While the operating costs for issuing loans increase with loan size, such an increase is less than proportionate. Hence, MFIs with small average loan sizes tend to have much higher operating costs per amount lent than an MFI with larger average loan sizes. This inverse curve of operating costs in relation to average loan size can be found in many markets.

Typically, the loan pricing follows cost – smaller loans have higher (and in case of very small loans, much higher) interest rates than larger loans. However, even MFIs with similar average loan sizes can have different cost structures and prices. Reasons for this can be manifold, including differences between MFIs in terms of their sizes and legal structures, lending modalities (group versus individual), geographic location (e.g. population densities), as well as operational efficiency. Likewise, variations in pricing can be due to differences in cost structures but also in profit levels.

Since the costs of lending are highly context-specific, comparisons between countries or between individual MFIs can be misleading. The use of benchmarks can be more meaningful at country level as long differences in average loan size and other product features, characteristics and location of clients, and differences in average costs of funds are factored in. Hence, any
analysis of interest rates needs to be contextualized to do justice to the specific MFI in question and avoid comparing “apples with oranges.” A further hindrance to the analysis of interest rates is related to the widespread lack of transparency on pricing. The use of different compounding factors (such as monthly “flat” versus annual declining balance), along with various fees, mandatory insurance, and compulsory deposits can result in very high effective interest rates if converted into Annual Percentage Rates (APR). It also hampers price competition and clients’ ability to make informed choices.

The affordability of loans is also highly context-specific depending on loan sizes and maturities, borrower transaction costs and alternative costs of funds. Generally, returns to capital invested in small-scale operations can be very high and tend to diminish as operations grow, mirroring the operating cost and interest rate curves on the supply side. Borrowing larger amounts over a longer period implies higher financing costs and makes farmers more sensitive to interest rates. Likewise, in many smallholder settings the costs of purchased inputs (financed by loans) are quite small compared to the value of the crops produced, and interest costs have a minor impact on net revenues. With increasing size and commercialization of farms, the share of cash expenditures in total production costs increases and loan demand becomes more interest-rate sensitive. The latter also applies to longer term finance with grace periods where financing costs can be substantial. While the profitability of farming can be high there is huge variability between crops, farmers, value chains and other context-specific factors, as well as over time. Beyond interest rates, proper loan structuring by aligning loan volumes and repayment schedule with borrower cash flow is a critical determinant of the affordability of loans and their benefits to clients.

Direct financing costs reflected in interest rates and fees are only one element of the total costs of borrowing. Borrower transaction costs and opportunity costs also need to be factored in and can be significant in case of bank lending as well as for subsidized loan programmes. Hence, effective interest rates are only one factor determining the value of a loan product to poor borrowers. Other loan product features such as ease of access and collateral requirements can be equally or more important.

Impact investors and development financiers have an important role to play in promoting transparent and responsible pricing in their investees and can provide important signals to other MFIs in their markets. Transparent pricing means that prices, terms, and conditions of financial products (including interest charges, insurance premiums, fees, and other) are adequately disclosed in a form understandable to clients. Responsible pricing means that pricing, terms, and conditions are set in a way that is both affordable to clients and sustainable for financial institutions. Transparent and responsible pricing are part of the Client Protection Principles developed by the Smart Campaign, recently taken over by the Social Performance Task Force (SPTF)+CERISE and updated into the Client Protections Standards (CPS). The latter are also integrated in the broader Universal Standards for Social and Environmental Performance Management developed by the
Cerise+SPTF. Several providers have already signed up for these principles and have undergone related certifications or social audits demonstrating commitment towards transparent and responsible pricing. Whether an MFI sets prices in a transparent and responsible way should be assessed during the due diligence (DD) process, preferably in two steps: first at institutional level, and then at product level focusing on the target products to be financed. The key guiding questions should be:

- Does the MFI communicate the full cost of the product along with all terms and conditions in a transparent and understandable way to the customers?
- Does the MFI have a reasonable cost structure?
- Is the profit level acceptable and who benefits from the profits?
- Is the client better off after provision of the loan?
- Does the MFI apply other key principles of responsible lending?

In addition to making responsible pricing part of the DD process, impact investors should engage in a process to help MFIs to strengthen their responsible lending practices. One way to do this is to require potential investees to sign a commitment to gradually implement the CPS under the Client Protection Pathway launched by Cerise+SPTF in 2021.1 Impact investors can support the investees through technical assistance to strengthen their responsible lending practices, improve their product features and delivery mechanism, as well as reduce the costs of providing credit and interest rates to clients.

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Introduction

The discussion on interest rates in the microfinance sector is as old as the industry. Should organizations that are aiming to better the lives of the poor charge interest rates that are significantly higher than those of bank loans? During the 1970s and 80s, the first microfinance institutions (MFIs), mainly non-governmental organizations (NGOs), started lending at low interest rates to poor people. During the 1990s, the emphasis shifted towards financial sustainability to allow MFIs to grow their portfolios without a continuous need for donor subsidies. Several large NGO MFIs converted into regulated financial institutions that can attract a broad range of funding sources including deposits, loans, and equity. During the commercialization of the MF industry, interest rates increased, and some MFIs were extremely profitable, compared with conventional banking standards.
The success of more mature MFIs has attracted a growing number of investors, both fully profit-driven and double-bottom line oriented. Likewise, commercial banks started entering the field, often by creating microfinance subsidiaries. The discussion on interest rates and profits became particularly heated in 2007 when ‘Banco Compartamos,’ the largest MFI in Mexico, sold 30 percent of its shares to investors at huge profits to shareholders. The unparalleled financial success of the initial public offering (IPO) was due to the MFI’s very high profitability on the back of very high interest rates charged to its clients – mainly poor women. This has sparked an intense debate within and outside the MF industry about the future path of microfinance and whether there should be limits on profits for an industry set up to serve the poor.

A related issue coming into the spotlight was the widespread practice of MFIs to display the prices of their loans in ways that make it difficult for clients to understand their full costs and compare loans from different providers. The use of monthly flat interest rates rather than annual rates calculated on a declining balance makes interest rates sound low. However, such rates often turn out to be very high when converted into Annual Percentage Rates (APRs) or Effective Interest Rates (EIRs) which also consider different compounding factors such as fees, mandatory insurance, or compulsory deposits. In addition to attracting customers, MFIs have used such pricing practices to avoid public discussions on interest rates and possible government measures to curb them. Unfortunately, this has created a downward spiral whereby transparent MFIs risk is being outcompeted by their less transparent peers, as effective consumer protection regulation and disclosure regimes are missing in most developing countries. Lack of clear and comparable pricing information also undermines market competition as a force to drive prices down, as clients are unable to make informed choices (CGAP, 2012).

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2 The IPO generated a market capitalization of over USD 2 billion compared to an initial capitalization of USD 6 million in 2000. Banco Compartamos achieved returns on equity (ROE) above 50 percent over seven consecutive years and Return on Assets (ROA) above 15 percent. Interest rates were around 120 percent expressed as APR.

3 While the APR converts all fees and flat interest rates into annual interest rates on a declining basis, the Effective Interest Rate (EIR) also considers whether interests are compounded more frequently (e.g. monthly, quarterly, etc.). Annex 1 provides an example of the impact of different pricing practices on effective interest rates.
Growing discomfort with such trends and the increasingly negative press on microfinance have sparked several initiatives to introduce and mainstream principles of transparent and responsible pricing, within broader efforts to advance consumer protection and social performance management across the industry. Nevertheless, despite some progress, non-transparent pricing practices still prevail and debates on the level of interest rates continue. An increasing number of countries has responded by introducing interest rate caps. While effective in reducing nominal interest such caps often cause unintended side-effects such as increases in fees, lower credit supply for small and risky borrowers, and reduced branch density (World Bank, 2018; Miller, 2013). Policy measures to enhance competition between financial service providers and reduce costs of lending may be more effective to reduce interest rates in the longer term. Such measures include disclosure regimes mandating financial institutions to communicate their prices and other product features in a standardized and transparent manner to the public, combined with financial education, improved borrower information and risk management instruments.

Despite their importance, such policy measures are beyond the scope of this Toolkit. The same applies to the broader discussion about the ability of MF to respond to the financial needs of agriculture and the broader food system. Conventional MF offering small and standardized loans with short duration and frequent repayment instalments is not well-suited to financing many agricultural activities, especially those with seasonal cash flow, longer gestation periods, or larger funding requirements. Hence, on the aggregate microfinance role in financing agriculture has been limited, notwithstanding some important variations between countries. Measuring its contribution is quite challenging due to issues related to the fungibility of money, the informal status of most micro-borrowers and different loan classifications and reporting standards between MFIs as well as between countries. Given the fungibility of money in farm households, some micro-lending labelled as consumer or business lending may still fund agricultural activities, either directly – in case of small-scale activities with quick turnover, or indirectly by freeing up other resources of farm households. Since the early 2000, an increasing number of MF providers have developed more specialized agri-lending products blending key features of both microfinance and agricultural lending. MF has made more important contributions to financing other segments of the food system, including small-scale food trading, processing, and retail, as well as for consumption smoothing.

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4 The main initiatives were MFTransparency (MFT, 2009–2015), The Smart Campaign (2009–2020), and the Social Performance Taskforce (SPTF) in partnership with CERISE – ongoing. These are described in the last section of this Toolkit.

5 For example, credit reference bureaus provide information about current liabilities and past repayment performance of loan applicants enabling lenders to screen out risky applicants at low transaction costs. Crop and livestock insurance help with managing risks linked to factors beyond the control of borrowers, such as drought or diseases. The use of non-traditional collateral such as warehouse receipts, moveable assets and livestock can be enabled through a legal and institutional framework that facilitates its registration (e.g. through electronic registries) and enforcement. All these measures reduce risks and transaction costs of lending allowing lenders to reduce interest rates.
In view of the increasing number of MFIs financing smallholder farmers and other small-scale actors along agricultural value chains, a growing number of impact investors\(^6\) including impact funds and DFIs have been financing such MFIs to help address the pervasive formal lending gap. Questions about the adequacy of interest rates charged by MFIs targeting farmers often arise during the DD process. The main purpose of this Toolkit is to provide guidance to managers, investment committee and board members of impact investors and development financiers on how to assess whether interest rates charged by specific MFIs are reasonable and responsible. In addition, it provides some guidance on how impact investors can contribute to mainstreaming the principle of transparent and responsible pricing in their investees and across the MF industry.

The Toolkit specifically targets impact investors lending to MFIs in order to enhance smallholder farmers’ access to finance and achieve impacts in terms of increased production, productivity and incomes, an objective of many investment vehicles supported by the European Union, such as the Agri-Business Capital (ABC) Fund\(^7\) AgriFi\(^8\) or Huruma Fund.\(^9\) Beyond its specific target audience, the Toolkit may also be useful for a broader audience concerned with agricultural finance and development, including IFIs and other development practitioners.

The Toolkit is structured into four sections. The first section discusses the main cost and market drivers of interest rates and their determinants. The second section provides some empirical data to illustrate the diversity of interest rates and their main cost drivers within and across countries. Section 3 briefly discusses some of the factors determining the costs and affordability of loans from a borrower perspective. The last section provides recommendations for impact fund managers and their shareholders on how to assess transparent and responsible pricing during DD and how to promote it more systematically during the investment process and support to related industry initiatives.

**References**

6 According to the Global Impact Investment Network (GIIN), impact investments are investments made with the intention to generate positive, measurable social and environmental impact alongside a financial return. Impact investors are balancing financial, social and - increasingly - environmental objectives (double or triple bottom line). https://thegiin.org/impact-investing/need-to-know/#what-is-impact-investing; in the remainder of this Toolkit, the term impact investors is used for a broad range of financiers including Impact Funds, DFIs, private foundations, individual investors, NGOs, and others.


8 AriFi, Impact Investment in Sustainable Agriculture. EDFI AriFi is a EUR 120 million impact investment facility funded by the European Union. https://www.agrifi.eu.

Chapter 1
Why are interest rates in microfinance high?

Let us first have a look at the basic cost components of loans and their main determinants. These are:

- cost of funds;
- operating costs;
- loan-loss provisioning;
- profit.

1.1 COST OF FUNDS
Costs of funds of an MFI depend on the interest rates it must pay to its creditors on the funds it lends out to its borrowers. These costs are determined by market conditions and specific MFI characteristics and vary considerably between countries and financial institutions. Market conditions include macroeconomic factors such inflation rates, central bank policies, and the legal, regulatory, and institutional framework in each country. Inflation rates erode the value of any financial asset and can have a major impact on the cost of funds. Fiscal policies such as excessive government borrowing in countries with shallow domestic capital markets may crowd out financing from banks to the private sector (including to MFIs) and lead to higher costs of such lending.

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10 Including monetary and exchange rate policies, refinancing rates, minimum reserve requirements for regulated financial institutions.
11 To attract funding, governments often issue treasury bills at high rates. Banks and other domestic investors consider such bonds as low-risk investments and bond rates as opportunity costs for lending to the private sector (including MFIs) to which risk primes and transaction costs are added resulting in elevated interest rates.
A country’s track record in macro-economic and financial sector policy management, along with the quality of its legal and institutional framework are reflected in the risk prime applied by domestic and international funders of MFIs. In countries plagued by macro-economic instability and weak fiscal and monetary policies, domestic borrowing costs can be double-digit. Loans provided in hard currency tend to be less expensive but expose MFIs to currency risks. If international financiers lend in local currency, interest rates tend to reach similar levels to those of domestic financiers after hedging costs are factored in.

Institutional features of an MFI such as its legal structure, size and track record also determine the type of funding sources available and their costs. For example, NGO MFIs may have access to grants or concessionary loans in their early development stages but usually must pay higher interests on commercial loans than their regulated peers.12 MFIs regulated as non-bank financial institutions (NBFI) and banks with MF operations can access a broader range of commercial funding source including deposits. However, deposit-taking NBFs often must pay higher interest rates than banks to attract deposits.13 In turn, member-based institutions such as credit unions can mobilize member deposits at low financial costs but face greater challenges in attracting commercial loans. The average cost of funds of individual MFIs also depends on their size, financial performance and track record and related risk perceptions by lenders and depositors.

### 1.2 OPERATING COSTS

Operating costs typically make up the largest portion of total lending costs. They comprise both direct costs related to appraising and managing loans (e.g. related to transport and staff time), as well as general administration and overhead costs (e.g. salaries, rents, ICT, and utilities). Especially salary costs tend to be a major part of operating costs, as microfinance is a high-touch business with many small transactions to be processed and loan officers being a critical interface with clients.

The Operating Expense Ratio (OER)14 is a standard measure of operating efficiency allowing to compare operating costs between MFIs by relating them to the outstanding gross loan portfolio. Microfinance has long indicated a benchmark for this figure of 10 percent to 15 percent of the gross loan portfolio (Waterfield, 2015a).15 However, the OER of individual MFIs need to be contextualized as regards its average loan size and other product features, market, and operating environment, as further discussed below. Thus, in some cases higher OERs may be justified.

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13 Banks can use economies of scale in deposit mobilization and are considered more secure by depositors than MFIs.
14 Total operating expenses in relation to gross loan portfolio.
15 View also MIX Market data for different regions in table 1 on page 10.
A key determinant of OERs in microfinance is loan size – a key distinguishing feature from commercial banking. To assess OERs of MFIs and understand why they are much higher than in banks, it is critical to understand the inverse relationship between loan size and operating costs. While loan appraisal and monitoring costs tend to increase somewhat with loan size, total operating costs per loan increase on less than proportionate rate. This is because most costs related to loan origination and management vary little with loan size and are rather fix per loan transaction. In other words, issuing loans of USD 250 costs almost as much as issuing loans of USD 2500. For this reason, MFIs with smaller average loan sizes have higher, sometimes much higher, OERs than MFIs with larger loan sizes.

Figure 1 illustrates this inverse cost curve with data from 48 MFIs from the Philippines plotting their OERs against their average loan sizes. It shows an exponential increase of the OER with declining average loan sizes, especially for MFIs serving the bottom end of the market, with average loan sizes below USD 500. For MFIs providing larger loans (above USD 1000), there are little differences in OERs in relation to loan size and the curve flattens out. Similar costs curves can be found in most countries (view next section).
While average loan size is a key determinant for OERs, there are other factors that matter too. This is also reflected in Figure 1 showing that MFIs with similar average loan sizes can still have quite different OERs. These differences can be due to variations in product features, operating environments, and efficiency levels of MFIs. For example, serving scattered clients in rural areas is more costly due to higher transport costs and a lower number of clients per loan officer, and would therefore result in a higher OER. In turn, highly standardized loan products and group lending reduce operating costs.\footnote{17} Likewise, longer average maturity of a loan portfolio reduces the OER as the portfolio rolls over more slowly and loan origination costs are lower in relation to the portfolio outstanding.

If differences in OERs among MFIs in the same country cannot be attributed to any of the above factors, they may reflect variations in operating efficiencies. For example, OERs seem to decrease with the age MFIs, especially during their first years in operation, and with growing loan portfolio size.\footnote{18} This could be due to various factors including i) efficiency gains through institutional learning and process improvements; ii) simplified loan appraisal for repeat customers (usually combined with larger amounts), and iii) higher staff and branch productivities.\footnote{19} There are also some economies of scale in central overheads such information technology (IT) infrastructure which can be distributed over a larger portfolio. Likewise, certain efficiency enhancing investments in improved IT capabilities may only be feasible for MFIs of a certain size.

Digitization can reduce operating costs and enhance efficiencies along the lending process (e.g. related to client on-boarding, loan appraisal and processing) resulting in higher loan officer productivity, streamlined workflows and faster turn-around times. Loan disbursements and repayments through digital channels such as cards, agents, ATMs, and mobile money can reduce transaction costs for MFIs and clients. Automated credit scoring and algorithm-supported loan appraisal systems are showing promise for further operating cost reductions. However, the adoption of such techniques by MFIs is still in an early stage and they have yet to prove their viability on a large scale, especially for smallholder finance. Early evidence on MFI digitization suggests that MFIs tend to adopt digital technologies gradually for an incremental improvement of their current operating model rather than for a complete overhaul (CGAP, 2021). Given their roots in close human contact with clients, the future of MFI lending may be more in hybrid approaches rather than full digitization as piloted by some Fintechs.

\footnote{17}{Group lending externalizes some of the due diligence (DD) and monitoring costs and tend to be cheaper than individual loans. Group lending with standardized repayment schedules are used especially for very small loans to contain costs, whereas more flexible and individualized products become more feasible for larger loans.}

\footnote{18}{An earlier study based on data from 1003 MFIs in 84 countries reporting to the Microfinance Information Exchange (MIX) during 1999 and 2006 found that: 1) for young MFI each additional year in the market reduced the OER by 2.8 percent on average. However, for older MFIs (7-11 years) the reduction dropped to 1 percent; 2) MFIs with less than 2000 clients had significantly lower OERs than those with 2000-5000 clients. However, the study did find almost no further reduction of OERs for larger MFIs suggesting a flattening of economies of scale past a certain size (Gonzales, 2007).}

\footnote{19}{Measured by numbers of active clients, loan portfolio size (or number of deposits mobilized) per staff and branch.}
As described in the next section, operating costs can also vary between countries and regions, due to differences in salary levels, population densities, road and communication infrastructure, fuel and electricity costs, and ease of access to borrower information.\textsuperscript{20} Average loan sizes in relation to per capita income also need to be considered when comparing OERs across countries.

1.3 \textbf{LOAN-LOSS PROVISIONING}

Loan loss provision is the amount set aside for covering the expected loan losses due to late or non-payments of loans. Hence, loan loss provisions are closely linked to the Portfolio at Risk (PAR) and the write-off rate both of which reflect an MFI’s ability to manage credit risks. High levels of PAR and loan write-offs increase the loan-loss provisioning expense and, hence, interest rates.\textsuperscript{21} The costs of dealing with defaulting borrowers\textsuperscript{22} are covered at least partially by penalty interest rates, so as not to charge them to performing borrowers via interest rates. However, such fees should be reasonable and be clearly communicated to borrowers upfront.

Microfinance typically has much lower default rates than banks and many MFIs used to have PARs (<30 days) below 2 percent before Covid-19 (Waterfield, 2015a). Nevertheless, PARs need to be contextualized in terms of target market and broken down by product.\textsuperscript{23} For example, in rural areas, borrowers are sometimes late with payments due to factors beyond their control: weather conditions may delay crop harvesting and haulage from fields, or off-takers may pay farmers late. Such factors may increase the PAR 30 days of rural lenders but do not pose any serious risk of default if clients pay later and PAR 90 drops considerably. Hence, a PAR 30 days up to 5 percent is considered reasonable and even higher levels may be acceptable for rural MFIs if their PAR 90 stabilizes at low levels.

In case of MFIs with extremely low PARs, one needs to take a closer look at their lending policies and client base. Is the MFI targeting the lowest risk clients (e.g. salaried employees or well-established micro enterprises) while avoiding more risky segments where finance could have a much larger socioeconomic impacts?\textsuperscript{24} Impact oriented MFIs need to balance such trade-offs and find a reasonable middle ground between their social objectives and the need to keep defaults at low levels.
Different risk profiles among loan products and clients are often reflected in the loan pricing – between different loan products according to respective client segments, but also within loan products according to risk profiles of individual clients. Typically, first-time borrowers are charged the highest interest rates (reflecting higher risks) and rates are reduced for subsequent loans subject to timely repayment. Slightly more advanced pricing systems determine interest rates for individual borrowers based on credit scoring models.

Variations in portfolio quality and related provisioning expenses between countries are due to differences in credit cultures, government policies and market infrastructure. For example, a legacy of policy interference such as loan forgiveness ahead of elections or poorly managed public lending programmes or revolving funds can undermine repayment culture. Market infrastructure such as credit reference bureaus and a legal and regulatory framework balancing borrower protection with effective foreclosure regimes in case of intentional default can reduce moral hazard. Such systemic contextual factors have a direct impact on the willingness to lend and the risk primes and interest rates charged by lenders.

**CAN AGRILOANS BE CHEAPER THAN MICROLOANS FOR NON-AGRICULTURAL PURPOSES?**

The answer is context specific and depends on the product and client features: agricultural loans are usually considered more costly and risky, but this is not always the case. Agriloans tend to be larger and have longer maturities than urban microloans. This reduces operating costs per the amount lent, which may (over) compensate higher transport costs and lower loan officer productivities of rural lending. If agriloans include grace periods and bullet repayments, interest incomes are higher compared to conventional microloans with biweekly or monthly loan repayments and shorter maturities, especially if interests are charged on a declining basis. This may provide some room for interest rate reductions if portfolio quality is similar. Risks and transaction costs can be reduced if, for example i) farmers are clustered in certain locations (e.g. around irrigation schemes); ii) loan repayments are made through off-takers (within value chain finance arrangements); iii) crop insurance is available; and iv) farmer have diversified income sources. Several MFIs report better repayment performance for their rural and agricultural clients compared to their urban portfolios, since farmers have fewer options to access credit at reasonable terms and are interested in keeping a good relationship with lenders. Moreover, in case of macroeconomic shocks, smallholder agriculture often serves as a shock absorber and rural portfolios tend to perform better than urban ones, as evidenced by the recent Covid-19 pandemic.

Nevertheless, the balance may shift against agriloans in other farming contexts: lending to rain-fed farmers operating in unstructured value chains, in scattered locations, and with limited non-farm income is more costly and may need to be (cross) subsidized.

**SOURCE:** Authors’ own elaboration.
1.4 PROFIT MARGIN

MFIs need to make a profit to increase their capital base, grow their loan portfolio, invest in new technologies, and pay dividends to their shareholders. When assessing overall profit levels of an MFI, it is important to consider how profits are used: does it use its profits to expand or improve its services to clients, or to pay dividends to its shareholders? MFIs with a double bottom line are faced with trade-offs in defining their profitability targets and related setting of interest rates. For example, an MFI may to target a low Return on Assets (ROA) to reduce interest rates for the benefit of its current borrowers. However, such decision would reduce its potential to grow its portfolio or invest in new technologies to benefit more clients in the future. A higher ROA (Return on Equity [ROE]) also helps to attract commercial funding sources. Similar trade-offs apply to the pricing of individual loan products. Should an MFI cross-subsidize loans to certain target groups (e.g. smallholder farmers) and charge higher interest rates to other borrowers? Hence, profit margins and related KPIs should not be analysed in isolation but in the context of the broader growth strategy of an MFI and its social targets.

Analyses of MFI show that in practice there is always cross-subsidization, including among borrowers for the same loan products, given the very different unit costs of different loan sizes, which are rarely matched by a similar differentiation of pricing within one loan product (Waterfield, 2015b. Balanced Pricing in Microfinance: Setting Prices to Balance the Needs of the Institution and the Clients. MFTransparency.org).
Chapter 2
Empirical data on interest rates, cost, and profits in microfinance

There is limited comparable data on microfinance interest rates and related cost and efficiency indicators at country and regional level. The only global database available is the Microfinance Information Exchange (MIX) Market which compiled self-reported data from MFIs around the world. The latest analytical report presenting key performance indicators at country and regional level dates to 2018, as the MIX ceased its reporting and benchmarking services and transferred its historic database to the World Bank’s Data Bank in 2019. MFT has collected very granular data on pricing and OER in relation to loan size and overall profitability of MFIs in different countries between 2007 and 2015. While both MIX Market and data are somewhat outdated, they can still serve as broad reference for some markets and for broader regional aggregates.


27 View also MFTransparency which has collected pricing data from 532 MFIs from 29 countries on 1705 loan products during 2008 and 2015. https://www.mftransparency.org/microfinance/pricing/

28 The Atlas database run by Microfinanza Rating has additional and more recent data for some MFIs and markets. However, access is subscription-based and could not be used for this analysis. https://www.atlasdata.org.
a) Data from the MIX Market – illustrating differences in KPIs between regions and types of MFIs

The MIX Market provides data on the yield on gross loan portfolio GLP which allows for a quick comparison between MFIs regarding the profitability of their lending activities. Portfolio yield relates total interest and fee income to the GLP and can be easily calculated from income statements and balance sheets. While it can also serve as a proxy for the average interest rates and fees paid by borrowers across all loan products, it does not fully reflect the costs to clients, for two reasons: First, the denominator (GLP) includes the non-performing part of the loan portfolio, while income is only generated by the performing loan portfolio. Hence, the average interest and fee paid by borrowers are higher. Second, portfolio yield does not capture the implicit costs of compulsory deposits to borrowers, a widespread practice of MFIs. Therefore, while reflecting portfolio profitability of the MFI, portfolio yield underestimates the real financial costs to borrowers.

A more precise approach to show the true costs of a loan to borrowers is by calculating either the APR or the EIR. In fact, in many OECD countries and some developing countries, regulators require financial institutions to disclose the costs of their products through one of these indicators, which makes it easier to compare interest rates for similar products in terms of loan sizes, maturities and customer profiles. However, APRs are less suitable to compare average interest rates of MFIs, as this requires calculating a weighted average APRs for each MFI, based on the APRs for each individual loan product adjusted by their respective shares in the total loan portfolio. Unfortunately, such information is not readily available at country or cross-country levels. Past efforts of systematic data collection under the MFT initiative were stopped in 2015. However, the MFT website is still online with plenty of resources including country reports and Excel tools to calculate APRs for individual products and entire MFIs. Hence, APRs can be calculated relatively quickly for specific products of interests (e.g. agricultural loans) offered by various providers in each market, or even for entire MFIs using these tools.

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29 Many MFIs require borrowers to keep the percentage of the loan on deposit with the lender as cash collateral. This increases the effective interest rate because interest accrues on the entire loan amount whereas the compulsory deposits de-facto reduces the loan amount available to the borrower. In other words, clients must pay interest on the amount locked as compulsory deposit, increasing the interest rate paid for the amount borrowed.
Table 1 below depicts data from the latest MIX Market Global Outreach and Financial Performance Benchmark Report 2017/18 (Mix, 2018) at global, regional, and country levels. Some caveats apply to the data and need to be considered for their interpretation. First, the report uses weighted averages based on the share of individual MFIs in the overall outstanding loan portfolio. The below averages therefore are strongly influenced by i) large MFIs; ii) large countries; and iii) banks and NBFIs which account for 83 percent of the outstanding loans reported to the MIX. Hence, the situation can be quite different in countries with smaller MF markets and larger numbers of NGOs. Second, the MIX dataset does not allow more granular analysis at country level given the very small number of reporting MFIs in most countries. In addition, those reporting do not always provide data on all key performance indicators; therefore, averages on various indicators often refer to different MFIs in the same country. Data for some African countries is presented in Annex 1 to illustrate these points.

Table 1

Key performance indicators from Mix Market database by region for fiscal year 2017

<table>
<thead>
<tr>
<th>Regions</th>
<th>Average loan balance in USD</th>
<th>Share Rural borrowers</th>
<th>Portfolio yield</th>
<th>OER</th>
<th>Opex / Borrower</th>
<th>Borrowers/loans officer</th>
<th>PAR 90 days</th>
<th>ROA</th>
<th>ROE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSA</td>
<td>991</td>
<td>60%</td>
<td>20%</td>
<td>14.5%</td>
<td>198</td>
<td>265</td>
<td>6.6%</td>
<td>1.5%</td>
<td>9.4%</td>
</tr>
<tr>
<td>EAP</td>
<td>1048</td>
<td>79%</td>
<td>15.3%</td>
<td>7.8%</td>
<td>70</td>
<td>350</td>
<td>3.3%</td>
<td>1.8%</td>
<td>9.4%</td>
</tr>
<tr>
<td>LAC</td>
<td>2275</td>
<td>23%</td>
<td>21.0%</td>
<td>12.3%</td>
<td>267</td>
<td>252</td>
<td>4.6%</td>
<td>2.1%</td>
<td>13.9%</td>
</tr>
<tr>
<td>ECA</td>
<td>2092</td>
<td>62%</td>
<td>20.8%</td>
<td>9.4%</td>
<td>198</td>
<td>219</td>
<td>14.5%</td>
<td>0.3%</td>
<td>2.5%</td>
</tr>
<tr>
<td>NENA</td>
<td>560</td>
<td>47%</td>
<td>26.2%</td>
<td>15.6%</td>
<td>80</td>
<td>314</td>
<td>3.7%</td>
<td>4.4%</td>
<td>10.8%</td>
</tr>
<tr>
<td>SA</td>
<td>378</td>
<td>72%</td>
<td>18.3%</td>
<td>9.0%</td>
<td>32</td>
<td>372</td>
<td>2.9%</td>
<td>2.8%</td>
<td>12.4%</td>
</tr>
<tr>
<td>Global</td>
<td>840</td>
<td>40%</td>
<td>19.2%</td>
<td>10.6%</td>
<td>87</td>
<td>327</td>
<td>4.7%</td>
<td>2.0%</td>
<td>11.5%</td>
</tr>
</tbody>
</table>


30 The report is based on self-reported data from 762 financial service providers (FSP) for year 2017. The total number of active borrowers of these FSPs stood at 120 million and the gross loan portfolio at USD 112 billion.
31 Banks and NBFIs account for 47 percent and 36 percent of the total gross loan portfolio and 30 percent and 35 percent of borrowers, respectively.
32 Sub-Saharan Africa (SSA); East Africa and Pacific (EAP); Latin America and the Caribbean (LAC); Eastern Europe and Central Asia (ECA); Near East and North Africa (NENA), South Asia (SA).
Despite these caveats, MIX Market data at higher aggregation levels can provide some reference points for more detailed analysis at country and MFI level. Globally, average yield on gross loan portfolio stood at 19.2 percent, OER at 10.6 percent, ROA at 2 percent, and ROE at 11.5 percent. Differences in portfolio yield are not very pronounced, except for East Africa and the Pacific on the lower side and the Near East and North Africa on the higher side. The same applies to profitability, with NENA on the high side again and Eastern Europe and Central Asia at the bottom. There are considerable differences in the average loan balances ranging from USD 378 in South Asia to USD 2275 in Latin America and the Caribbean, with a global average of USD 840.

While OERs also vary from 7.8 percent in East Africa and Pacific to 15.6 percent in the NENA, a higher OER does not always go in tandem with smaller loan sizes or higher shares of rural borrowers. South Asia has the smallest average loan size but the second lowest OER. In turn, Latin American and the Caribbean has the highest average loan size, but its OER is only slightly above global average. This may be for various reasons: first, for better comparison, average loan sizes need to be contextualized in relation to the gross national income (GNI) per capita which varies considerably between regions being much higher in Latin America and the Caribbean and Eastern Europe and Central Asia than in South Asia. Second, there are major differences in the key operating cost components as well as efficiency levels among regions which may overcompensate the effects of average loan sizes on OERs. For example, average operating costs per borrower are by far the lowest in SA (USD 32), due high population densities, low salary levels, and the preponderance of group lending. They are much higher in Africa, Eastern Europe, and Central Asia and Latin America and the Caribbean ranging from USD 198 to USD 267, reflecting higher salary levels, lower population densities, and a larger share of individual lending.

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33 This data needs to be interpreted with caution, as not all MFIs have reported a breakdown of borrowers into rural and urban. In case of SSA, LAC and SA, the breakdown only capture 56 percent, 49 percent, and 55 percent of all active borrowers, respectively.

34 Expressing average loan sizes as percentage of gross national income (GNI) is used as a proxy for the poverty status of the borrowers.
Table 2 provides a breakdown by type of MFI. It shows that NBFIs are dominant in terms of number of borrowers, followed by banks and NGOs. Banks and NBFIs have larger average loans sizes than NGOs, and lower average portfolio yields. There are no major differences in OERs between the main types of MFIs (NBFIs, NGOs and banks). What stands out is the high profitability of the NGOs and their relatively low OER, despite having much smaller average loans than banks and NBFIs. This may be largely due to the weight of some very large NGOs in Bangladesh and India. Credit unions have the lowest profitability and portfolio yield, given their shareholder structure.

### Table 2
**Key performance indicators from Mix Market database by type of MFI, for fiscal year 2017**

<table>
<thead>
<tr>
<th>Type</th>
<th>Av. loan balance (USD)</th>
<th>Active borrowers (million)</th>
<th>Share rural borrowers</th>
<th>Yield on GLP</th>
<th>Opex ratio</th>
<th>Opex/borrower</th>
<th>Borrowers per loan officer</th>
<th>ROA</th>
<th>ROE</th>
</tr>
</thead>
<tbody>
<tr>
<td>NBFIs</td>
<td>819</td>
<td>42.6</td>
<td>25%</td>
<td>20.5%</td>
<td>11.2%</td>
<td>93</td>
<td>297</td>
<td>2.3%</td>
<td>12.6%</td>
</tr>
<tr>
<td>NGOs</td>
<td>341</td>
<td>35.8</td>
<td>67%</td>
<td>23.4%</td>
<td>12%</td>
<td>38</td>
<td>317</td>
<td>4.9%</td>
<td>14.1%</td>
</tr>
<tr>
<td>Banks</td>
<td>1257</td>
<td>37.3</td>
<td>28%</td>
<td>17.7%</td>
<td>10.1%</td>
<td>120</td>
<td>394</td>
<td>1.5%</td>
<td>10.3%</td>
</tr>
<tr>
<td>CUs/Coops</td>
<td>2371</td>
<td>2.5</td>
<td>42%</td>
<td>15.6%</td>
<td>8%</td>
<td>219</td>
<td>344</td>
<td>1.1%</td>
<td>6.5%</td>
</tr>
<tr>
<td>Rural banks</td>
<td>398</td>
<td>1.3</td>
<td>74%</td>
<td>29.6%</td>
<td>21.5%</td>
<td>87</td>
<td>302</td>
<td>2.6%</td>
<td>13.4%</td>
</tr>
<tr>
<td>Global</td>
<td>840</td>
<td>120</td>
<td>61%</td>
<td>19.2%</td>
<td>10.6%</td>
<td>87</td>
<td>327</td>
<td>2.0%</td>
<td>11.5%</td>
</tr>
</tbody>
</table>


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35 BRAC and ASA in Bangladesh with almost USD 2 billion outstanding portfolio each, and SKORDP in India with almost 1 billion, out of a total of USD 12.3 billion of reporting NGOs.

36 While 98 percent of rural banks, 86 percent of NGOs and 72 percent of cooperatives breakdown their clients by urban and rural, only 44 percent and 31 percent of NBFIs and banks do so, respectively.
b) Cost and price curves in relation to loan size – evidence from different countries

Data collected by MFT during 2008–2015 allows some deeper insights into the relation between portfolio yields, average loan sizes and OERs for different countries. Table 3 shows average OERs from MFIs in ten countries displayed in the cells of the table, in relation to their average loan sizes. The latter are expressed as percentage of GNI per capita (left column), to make them more comparable across counties. The data illustrates the cost curve based on the inverse relationship between OER and loan size across countries. It shows a significant increase in the OER for smaller loans, especially below 25 percent of GNI per capita. On average, MFIs with loan size around 25 percent of per capita GNI had an OER of 18 percent compared to and OER of 28 percent for MFIs with average loan sizes of 10 percent or GNI, and 58 percent for those with the smallest average loan sizes of only 5 percent of per capita GNI. On the lower end of the curve, for average loan sizes above 100 percent of GNI per capita, there is no further decline in the OER.

Table 3
MFI: Operating Expense Ratios for ten countries in relation to average loan size

<table>
<thead>
<tr>
<th>GNI per cap.</th>
<th>Mexico</th>
<th>Colombia</th>
<th>Brazil</th>
<th>Philippines</th>
<th>Azerbaijan</th>
<th>Ecuador</th>
<th>Nepal</th>
<th>Bosnia (Plurinational State of)</th>
<th>Bulgaria</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;5%*</td>
<td>50%</td>
<td>55%</td>
<td>60%</td>
<td>60%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>58%</td>
</tr>
<tr>
<td>5% - 10%</td>
<td>33%</td>
<td>28%</td>
<td>35%</td>
<td>32%</td>
<td>21%</td>
<td>25%</td>
<td></td>
<td></td>
<td></td>
<td>28%</td>
</tr>
<tr>
<td>10% - 25%</td>
<td>20%</td>
<td>18%</td>
<td>24%</td>
<td>22%</td>
<td>17%</td>
<td>15%</td>
<td>13%</td>
<td>15%</td>
<td>25%</td>
<td>16%</td>
</tr>
<tr>
<td>25% - 50%</td>
<td>12%</td>
<td>19%</td>
<td></td>
<td>16%</td>
<td>14%</td>
<td>10%</td>
<td>8%</td>
<td>11%</td>
<td>17%</td>
<td>12%</td>
</tr>
<tr>
<td>50% - 100%</td>
<td></td>
<td></td>
<td></td>
<td>12%</td>
<td>12%</td>
<td>5%</td>
<td>5%</td>
<td>7%</td>
<td>14%</td>
<td>8%</td>
</tr>
<tr>
<td>100% - 150%</td>
<td></td>
<td></td>
<td></td>
<td>10%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>13%</td>
<td>7%</td>
</tr>
<tr>
<td>&gt; 200%</td>
<td></td>
<td></td>
<td></td>
<td>12%</td>
<td>6%</td>
<td></td>
<td></td>
<td></td>
<td>9%</td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>34%</td>
<td>28%</td>
<td>35%</td>
<td>28%</td>
<td>15%</td>
<td>14%</td>
<td>9%</td>
<td>11%</td>
<td>16%</td>
<td>10%</td>
</tr>
</tbody>
</table>


*Average loan sizes as percentage of GNI per capita.

The data also shows that OERs were significantly higher in countries where the bulk of the microloans are in the smallest loan size segments (Mexico, Colombia, Brazil, and the Philippines), below 50 percent of per capita GNI, compared with countries with larger loan sizes (Bolivia [Plurinational State of], Bulgaria). At the same time, the table shows some variation in OERs between countries targeting similar market segments expressed by average loan size in relation to GNI reflecting differences in cost drivers and efficiency levels between him countries discussed before. While the specific data is outdated, the overall picture is likely to remain valid.
How do interest rates follow operating costs? MFT provided data for some markets by plotting portfolio yields and OERs of MFIs. Figure 2 presents cost and price curves for MFIs in the Philippines, the Plurinational State of Bolivia, Ecuador, and Mexico based on data collected by MFT between 2008–2011. The general picture that emerges shows that portfolio yields seem to follow OERs across the loan size spectrum and the spread remains largely constant, decreasing a bit for very small loans. This confirms that operating costs are a major driver of loan pricing. However, the graph also shows different OERs, and portfolio yields for any given loan size. While these differences might be partially due to the aforementioned factors (client characteristics, lending method, rural versus urban, etc.), they also reflect variations in efficiency and profits among MFIs, as well as in their costs of funds and loan losses.

**Figure 2**
Cost and price curves for select countries
Figure 3 illustrates this by plotting the ROA of MFIs in Peru and Mexico against their loan sizes. In Peru the relationship is rather constant across the continuum of loan sizes, with an average ROA about 3 percent and for 90 percent of MFIs below 5 percent. It does stand out, however, that those earning more than 5 percent are primarily in MFIs with the smallest loans. Overall, the profitability of MFIs providing different loan sizes is similar, indicating that higher OERs for small loans are offset by higher prices.

On the other hand, the figure on Mexico shows a more diverse picture: Most Mexican MFIs provide very small loans, below USD 500 but profitability is very different in the same market segment, ranging from very high to negative. Half of the MFIs are earning ROAs above 5 percent, with some of the largest MFIs in the country earning close to 20 percent. This illustrates very different pricing and profitability strategies of MFIs in the market environment allowing it to do so, including some very high profits such as in the case of Compartamos.

Overall, the data shows that it is difficult to identify a “market interest rate” given the variation of average interest rates expressed as portfolio yields, even between MFIs offering similar loan sizes. Part of the reasons for the huge variations in yields and profits among MFIs operating in similar market segments is the lack of transparent pricing. This implies that interest rates are not responsible in the sense of the best balance between affordability and financial sustainability.
Chapter 3
Can poor borrowers afford high interest rates?

Economic activities requiring small investments with quick rotation of capital such as petty trade, street vending and artisanal production are often very profitable in terms of returns on capital invested.\(^\text{37}\) Anecdotal evidence and some studies suggest that the smallest microenterprises often have the highest returns on capital invested which then tend to decline with increasing capital stocks.\(^\text{38}\) One possible explanation for this trend could be that mark-ups on very small transactions tend to be high while decreasing with higher transaction volumes. As discussed in the previous section, MFIs typically charge high interest rates for very small loans, and interest rates decline with growing loan sizes. This suggests that profitability curves of micro enterprises in relation to scale tend to mirror cost and price curves of MFIs in relation to loan size. At the same time, the below-cited studies found that interest rates are well below returns to capital and that high marginal returns to capital point towards credit constraints.

\(^\text{37}\) Based on an experimental field experiment in Sri Lanka, it was found that microenterprises had an average return to capital of 5.7 percent per month or at least 68 percent per year, substanti all above market interest rates. Returns tend to be flat or decreasing, and no evidence of increasing returns were found over the sample range. (De Mel et al., 2008.)

\(^\text{38}\) For example, as stated in a recent survey on enterprises in Mexico, it was found that returns on capital were above 15 percent per month for the smallest firms with invested capital below USD 200. Returns decreased to 7-10 percent for firms with capital between USD 200-500 and to 5 percent on average for firms with USD 500 to USD 1000. Firms with capital above USD 1000 had monthly returns of 3 percent per month, roughly in line with the interest rate of MFIs. (McKenzie and Woodruff, 2006.) Similar evidence was found in Peru based on panel data: very high marginal returns to capital (14 percent per month) at low levels of capital stock (below USD 130, covering more than half of the surveyed micro-enterprises), and rapidly declining returns with increasing capital. (Göbel et al., 2011.)
However, returns on capital are only one part of the picture, as net revenues of micro-enterprises in the smallest segment are very low, often below the poverty line, despite high returns on capital. Microloans can help micro-entrepreneurs to expand their scale of operations resulting in higher net income. Hence the key question is whether the negative impact of financing costs on profits outweighs the loan’s positive impact on profits through increased net income. Since MFI loans finance only a part of the working capital or investment needs, the overall impact of interest costs on profits may be small compared to increase in profits resulting from an expansion of the business operation. At the same time, with increasing capital requirements and diminishing returns on that capital, borrowers are becoming more interest rate sensitive.

In case of farmers, there is also evidence on high land productivity of small family farms in developing countries and an inverse relationship between farm size and productivity, even though some more recent evidence points towards a U-shaped curve (Helfand, 2021; Foster, 2022). More importantly, returns to capital are highly diverse, depending on type of activity and location and farmer-specific conditions. For example, Udry (2006) found average return to capital of 250 percent per annum on medium-sized plots of 0.3 ha of pineapple production in Ghana, over a production cost around USD 330. Returns in food crops (maize and cassava) for the same farmers were much lower but still between 30 and 50 percent per annum. A study on the profitability of small holder irrigated vegetable farmer in South Africa found an average profitability of 47 percent (GM over working capital invested), ranging from 8 percent for maize to over 300 percent for potatoes and spinach (Mdoda, 2019). Recent survey data from Azerbaijan, with an average farm size of 3.3 ha, showed an average return over gross margins of 159 percent across 49 crops whereas gross margin over gross income averages 61 percent. As per definition, gross margins still need to cover fixed costs, so net incomes are lower.

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39 In the above example, a return of 15 percent on USD 200 results in a profit of USD 30 per month.
40 Microfinance-led enterprise growth may plateau when marginal returns on capital in micro-enterprises have reached the level of microfinance interest rates.
41 Based on ongoing FAO work in support of the Agricultural Credit and Development Agency. Data from Türkiye is in a similar range.
Return on capital can be very high in smallholder farming, if the share of purchased inputs in total production costs and gross revenues is low, as most of the work is carried out by family labour.\(^4^2\) In this case, the financing costs of inputs have a minor impact on gross margins, especially if compared to the loan's impact in terms of increased gross income (crop output) resulting from the additional inputs used. Hence, smaller farmers may benefit from loans even at high interest rates. At the same time, the overall net revenue from farming activities may remain low in comparison to family consumption needs, given the small scale of operations. More input-intensive crops often have lower returns on capital invested but generate higher gross margins per hectare.\(^4^3\) Likewise, the expansion of farming operations leads to higher farm income but decreasing returns on capital invested resulting from additional costs for hiring labour or renting/purchasing land. While access to credit allows farmers to switch to higher value crops or expand their area of operation, higher debt levels and lower returns on capital increase risks (especially under rainfed conditions and in case of price volatility) and make farmers more interest rate sensitive. The same applies in relation to loan maturity. Investments in high-yielding tree crops can be quite profitable but only start generating positive cash flow after several years. Longer-term loans may be required to finance such investments but can lead to substantial financing costs making the demand for such loans much more sensitive to interest rates.

Affordability of loans does not only depend on comparing returns on capital with interest rates. Proper structuring of loans in line with the cash flow of clients is equally important. Farmers generally prefer repaying working capital loans in one single bullet payment after selling their crops even though loans imply higher financing costs.\(^4^4\) Moreover, small farmers tend to have non-farm income which needs to be considered both in assessing borrowing limits and repayment capacity but also loan structuring. Farmers with higher levels of non-farm income and less seasonal cashflows often prefer starting loan repayments earlier along with shorter loan maturities to reduce risks and financing costs. Since money is fungible, responsible lenders appraise and structure loans based on the entire farm household cash flow factoring in all incomes and expenditures. This includes assessing the free cash flow after deducting consumption needs, other household expenditures and liabilities to determine borrowing limits, and structuring loan repayments in accordance with the farm household cash flow.

\(^{42}\) Family labour is not valued as production costs. Rather, net revenues are the return to family labour invested on the farm.

\(^{43}\) In the study on Southern Africa, it was found that the crops with the highest investment requirements for external inputs had the highest gross margins, but the profitability (Return per Rand invested) were much lower.

\(^{44}\) In fact, principal repayment at the end of the loan maturity is equivalent to a flat interest rate leading to a higher APR than in case of declining balance.
Overall, the profitability of crop and livestock production and repayment capacity of farmers are highly farmer and context specific, depending on factors such as education and farming skills; age; access to water, technology, and markets; and value chain characteristics, among other factors. Beyond location, farmer and crop related factors, profitability is also increasingly variable over time due to increasing impacts of climate change and market volatility. Therefore, the ability to reduce and manage risks is becoming increasingly important for the supply and demand for loans and for avoiding prohibitive risk primes factored into interest rates. Such measure may include agricultural insurance, but also strengthening of savings mechanisms in contexts where lending becomes too risky.

Last, the direct financing costs reflected in interest rates and fees are only one element of total costs of borrowing. Borrower transaction costs and opportunity costs also need to be factored in and can be significant. The former include money and time spent on travel to the nearest branch, obtaining documents required by the lender, and other costs to obtain loans. Examples for the latter include lost income due to the late loan approvals and disbursements which can be a major problem in time-bound activities such as farming. One reason why the poor continue borrowing from moneylenders even if loans at lower interest rates are on the market is the instant access to funds without any paperwork or need for collateral (hence very low transaction costs and opportunity costs). On the other side of the equation, subsidized credit programmes offered by state institutions often have low direct financing costs, but high transaction and opportunity costs. Microfinance is somewhere in between, that is, interest rates are below those of informal lenders but above those of banks. Borrower transaction costs and turnaround times are faster than those of banks but not as fast and low as from moneylenders (or supplier credit).
Chapter 4
Implications for impact investors

The analysis has shown that pricing and the cost structures that determine it vary widely among MFIs, countries, and regions. Broad regional or global benchmarks may mean little for assessing a particular MFI, as they lump together very different types of institutions with very different cost structures and market environments. Country benchmarks can be more useful but the analysis of the costing and pricing structure of individual MFIs and loan products still needs to be contextualized based on target clients, product features and institutional characteristics of the respective MFI.

Providing small loans in rural areas is expensive and high interest rates are often primarily a reflection of such costs. However, this is not always the case, especially with rural MFIs that often operate in areas with limited competition from other formal lenders and in markets where prices are not disclosed transparently. In such settings, borrowers cannot easily understand and compare the full costs of loans from different providers. Such lack of price transparency undermines market competition and allows MFI managers to set interest rates at their discretion. Moreover, the work of MFT and others has revealed that many MFIs have limited skills in cost-based loan pricing and may even not know the true costs of loans (APRs) of their competitors if these are not displayed transparently.⁴⁷ Hence, in low-access environments with limited product options and many unregulated informal providers, interest rates charged by MFIs may neither reflect the costs of lending and nor be determined by effective market competition.

TRANSPARENT AND RESPONSIBLE PRICING

The Smart Campaign led by the Centre for Financial Inclusion (CFI) in collaboration with MicroFinance Transparency (MFT) introduced the concepts of transparent and responsible pricing in 2010.

- **Transparent pricing** means that prices, terms, and conditions of financial products (including interest charges, insurance premiums, fees, etc.) are adequately disclosed in a form understandable to clients. Flat interest rates should be avoided, and the use of upfront fees and cash deposits be limited, and if used, annual percentage rates be calculated.

- **Responsible pricing means** that pricing, terms, and conditions are set in a way that is both affordable to clients and sustainable for financial institutions (Smart Campaign, 2010; CFI 2019).


### a) Impact investors have an important role in promoting transparent and responsible pricing

MFT’s work has also shown that transparent pricing does not automatically lead to responsible pricing and that a firm commitment by MFIs and their funders towards responsible pricing is needed (Waterfield, 2015b). Impact investors therefore have an important role in promoting transparent and responsible pricing by their investees thereby providing important signals to other MFIs, especially in countries with no effective financial disclosure regimes and poor consumer protection, and in low-access environments such as most rural areas. This includes a thorough assessment of loan pricing, cost structures and responsible lending practices during DD, as well as monitoring and supporting such practices during the investment cycle in connection with broader industry initiatives promoting transparent and responsible pricing as part of client protection standards and social performance management (see Boxes 2 and 3).

Transparent and responsible pricing are part of the **Client Protection Principles (CPP)** developed by the Smart Campaign set up by ACCION’s Center for Financial Inclusion (CFI) in consultation with industry stakeholders including MFI representatives, funders, impact investors and rating agencies. Between 2013 and 2020, the Smart Campaign managed the Client Protection Certification programme allowing for independent, third-party evaluations to publicly recognize financial institutions that met adequate standards in their treatment of clients. Specialized microfinance rating agencies took on the job of conducting independent assessments of MFIs’ compliance with the CPPs.
In 2020, the Smart Campaign ceased its operations but its work to promote responsible lending was taken over by the Social Performance Task Force (SPTF) + CERISE as part of their broader work Social Performance Management (SPM). The CPP were updated into the Client Protection Standards (CPS) (see Box 3) which are also integrated in the broader Universal Standards for Social and Environment Performance Management developed by the CERISE + SPTF.

Several MF providers have already signed up for these principles and underwent related certifications or social audits demonstrating commitment towards transparent and responsible pricing. These providers are committed to implement transparent and responsible pricing along with other responsible lending practices.

**BOX 3**

**CERISE + SPTF’S CLIENT PROTECTION STANDARDS**

1. Appropriate product design and delivery.
2. Prevention of over-indebtedness.
3. Transparency.
4. Responsible pricing.
5. Fair and respectful treatment of clients.
6. Privacy of client data.
7. Mechanisms for complaint resolution.
8. Governance and HR committed to client protection.

Each of the above standards has a range of specific indicators grouped into entry level (33 indicators), progress level (21 indicators) and advanced level (24 indicators).

**SOURCE:** Author’s own elaboration based on: CERISE + SPTF. 2022. Universal Standards for Social and Environmental Performance Management. CERISE + SPTF.

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48 A total of 135 MFIs in over 40 countries were certified to respect the seven principles between 2013 and 2020.


51 Thirty-five providers have active certificates under the new scheme. 126 have been certified under the previous scheme managed by Smart Campaign of which 65 are expired.
b) Guiding questions for assessing transparent and responsible pricing during due diligence

**Transparent pricing**
Assessing the transparency of pricing is relatively straightforward. Does the MFI communicate the full cost of its product in a transparent and understandable way to the customers? The assessment may follow the guiding questions in Box 4.

**CHECKLIST ON TRANSPARENT PRICING DURING DUE DILIGENCE**

1. Does the MFI disclose its basic product information including pricing transparently in its premises, at agent locations, or digitally, as applicable?

2. Does the MFI provide clients with a **Key Facts Document** that contains the following information about their loans:
   i. total loan amount;
   ii. pricing, including all fees, expressed as total cost of credit, Annual Percentage Rate (APR) or Effective Interest Rate (EIR);
   iii. disbursement date and loan term;
   iv. repayment schedule with principal and interest amounts, number, and due dates of all repayment instalments, and grace periods; if applicable;
   v. all deductions from principal disbursement (e.g.: first instalment, commissions, fees, cash collateral, taxes), if applicable;
   vi. how cash collateral/mandatory savings can be in case of default, if applicable.
   vii. Moratorium interest rates, terms, and conditions, if applicable.

3. Do **loan contracts**, in addition to the above, include the following information, as applicable to the product:
   i. automatic account debiting mechanisms;
   ii. linked products (e.g. insurance);
   iii. member or guarantor obligations;
   iv. collateral requirements and seizing procedures;
   v. consequences of late payments and default;
   vi. possible changes of terms and conditions over time and implications for clients.

**SOURCE:** Author’s own elaboration.
Balanced and responsible pricing

Assessing whether an MFI's pricing is responsible is a more complex task. The basic question is whether the MFI's pricing reflects an adequate balance between its financial goals to safeguard its long-term financial sustainability and growth with its social goals to maximize the benefits of its clients in terms of affordability and financial benefits.

The DD process should be guided by the following questions:

1. Does the MFI apply a pricing formula for its loan products based on its main cost components (costs of funds, OER, loan-loss provisioning expense and profit margin)?
2. Are the main loan products priced in line with the MFI's cost structure?
3. Is the cost structure reasonable compared to other providers in the market with similar products and target client?
4. Are profit level and loan pricing in line with the MFI's social objectives?
5. Does the loan pricing and other product features (e.g. delivery mechanism and repayment schedule) respond to the repayment capacity of the target clients?

The assessment should be conducted at two levels: first at institutional level, and then at product level. The institutional level analysis helps to assess whether the overall cost structure, profit levels and efficiency of an MFI are reasonable in comparison with its peers and in balancing its financial and social objectives. The product-level analysis can delve deeper into whether pricing and other product features are suitable and affordable for the target clients focusing on the main products of the MFI and the specific products to be expanded by the impact funding (e.g. agricultural loans).

The MFI's pricing policy, cost structure and loan pricing need to be contextualized and compared with relevant peers and benchmarks. While some country-level benchmarks by types of microfinance providers can be a starting point, a more relevant comparison would be against specific providers targeting similar clients, offering similar products features (e.g. loan sizes, maturities, delivery mechanisms, collateral requirements, etc.) and loan purposes (type of agricultural activities financed, locations, and other).

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Total Cost of Credit (TCC) represents the cumulative amount a borrower must pay for loan (including all interest, fees, and charges). Some studies suggest that poor borrowers are more concerned whether their cash flow allows them to cover periodic loan payments rather than about interest rates. The TCC provides this information and is easier to understand for low-income customers taking short-term loans, compared to APRs expressed on an annual basis. However, the downside is that it is less comparable than standardized measures such as APR and EIR. Hence, APR and TCC are complementary and should both be provided by transparent lenders.
The DD assessment should look at the following parameters:

**INSTITUTIONAL LEVEL ANALYSIS**

**Portfolio yield or Average Annual Percentage rate**

First, the portfolio yield or APR should be calculated. Especially, if the portfolio yield or the APR is significantly (e.g. 15 percent) higher or lower than those of relevant peers, the reasons for this divergence need to be examined through a comparative analysis of the cost structure and profit levels. Such analysis is still recommended if portfolio yield is in line with competitors, as benchmarking major cost components against peers allows identifying potential inefficiencies and areas for improvement, and for a better understanding of whether the pricing is balanced or could be revised (upward or downward).

Hence, as a next step, DD should look at the cost structure to assess whether it is in line with relevant peers and whether profit levels are adequate.

**Average costs of funds and funding structure by source**

- Does the provider have higher or lower average costs of funds than its main competitors?
- How does the proposed financing affect the average costs of funds?
- Are differences in funding costs reflected in the product pricing (reflected in the average APR and portfolio yield)?

**Operating Expense Ratio**

- Is the OER within an acceptable performance range considering the MFI’s product features (e.g. average loan size and maturity, group, or individual lending) and target market (e.g. clients’ geographic location, population densities)?
- If outside of the range, can the provider give a valid justification?
  - Does the provider have a credible plan to reduce its OER?

If not, the provider may transfer unnecessary costs to its clients. A time-bound strategy would need to be developed to reduce the OER (and loan pricing) and this may be agreed upon as loan covenant.

**Loan Loss Expense Ratio**

- Is the Loan Loss Expense Ratio (LLER) below 2 percent and the PAR 30 days below 5 percent?
  - A higher LLER could indicate serious portfolio quality issues, with excessive costs being charged to performing borrowers. A further explanation and assessment of the causes needs to be provided. In case of a PAR 30 above 5 percent, the aging structure of the PAR needs to be analysed as well as the write-off rate. If in case of a rural lender the PAR 90 days stabilizes at low levels and the write-off rate is low, overall collection rates and portfolio quality may still be considered sound.
  - In case of very low LLERs and PARs 30 (below 2 percent), a closer look at the client base and underwriting criteria would be warranted from an Impact investment perspective. If the low PAR is due to overly restrictive lending policies and the MFI is focusing on the lowest risk client segments, the social and economic impact of additional funding may be limited.
Return on Assets

- Is the ROA within the generally accepted range of 2–5 percent?

If outside of the range, the provider should be able to provide a valid justification. In case of a lower ROA, the DD should examine whether this is due to inefficiencies or insufficient pricing. In case of a higher ROA, the use of the profits needs to be examined. Have these been used reinvested for portfolio growth or new products and services to customers, or to pay shareholders? Especially, smaller MFIs with limited external funding sources often rely on retained earnings to fund their growth. If more than one third of the profit is paid out to shareholders, the social mission of the provider should be assessed with greater scrutiny.

PRODUCT LEVEL ANALYSIS

Product pricing
The APR for the MFI’s main products and the (agricultural) loan products targeted by the impact funder should be analysed against competing products in the market\(^\text{53}\) and the MFIs cost structure and average APR/portfolio yield. If the APRs for these products are 15 percent above or below its peers, the provider should provide a valid justification. The same would apply in case the products are priced above average loan prices of the MFI or below its average lending costs revealed by the intuitional analysis.

Questions may include:
- Is the client risk profile of the respective product higher? Is the PAR for this product substantially above the institutional average?
- Is average loan size and/or maturity different?
- Is the OER for the product higher, and for what reason?
- Does the MFI intentionally cross-subsidize the product (in case of low pricing)?

If prices are deemed unreasonably high, a clear, time-bound strategy should be prepared how pricing will be revised and reduced. Depending on the causes, this may involve specific measures to reduce operating costs, loan losses or profit margins for the product and may even include the mobilization of lower costs funding for specific products (e.g. medium-term investment loans).

\(^{53}\) The MFT Pricing Analysis Tool could be used for such purpose. https://www.mftransparency.org/resources/calculating-transparent-pricing-tool/.
Adequacy of product design and affordability

As previously discussed, pricing is not the only parameter determining the affordability and value of loans for clients. Adequate design of product features and delivery mechanisms according target clients’ needs as well as MFIs’ overall conduct in terms of responsible lending practices are equally important.

In line with CPS 1, the DD may assess whether the provider:

- designs new products and delivery channels using insights from market and pilot studies, client feedback, and client outcomes data;
- ensures that client transaction costs and loan processing times are reasonable;
- modifies its products and services in response to clients’ needs, feedback, and outcomes;
- conducts client satisfaction surveys at least every other year, as well as interviews with dormant and/or exiting clients to look for evidence of product design failures;
- analyses product use by demographic and socioeconomic segments of its clients;
- applies collateral and guarantor requirements that do not create severe hardship for clients;
- tailors repayment schedules to the client’s cash flows and type of business.

If the impact investor is particularly targeting the expansion of agri-lending, the DD may also assess whether the provider:

- collects information about the costs, prices and profitability of the main agricultural products financed;
- employs loan officers, credit committee and board member(s) with special background or training in agriculture;
- calculates the total cost of credit to borrowers compared to gross margins and net income of typical agriborrowers.

While the above list of questions helps to assess the status and capacity in terms of responsible lending in general and in agricultural lending in particular, it may contribute to identifying areas to be further developed and strengthened, possibly through technical assistance (TA) on a cost-sharing basis.

The adequacy of product design and its affordability for clients are also reflected in the product performance in terms of client numbers and growth and portfolio quality which should be analysed accordingly.

54 The provider’s products, services and channels benefit clients.
High price markets

A particular issue for impact investors is to decide whether to invest in MFIs in countries where prices are very high compared to global or regional benchmarks (or neighbouring countries). During the DD, the reasons for the high prices should be examined. Are there any specific factors in the environment that contribute to higher than usual costs such as i) high salary levels; ii) extremely low population densities; iii) high inflation rates and unstable exchange rates; iv) infrastructure constraints (such as electricity, roads, ICT costs); or v) regulatory issues inhibiting the growth and operational efficiency of MFIs. In addition, the DD should assess any impact studies or other evidence showing that clients are benefitting from microfinance services despite high costs.

If the level of pricing cannot be explained by any of the above factors, the high price level may be due to inefficiencies, lack of competition and excess profits. In this case, investments should only be pursued if the MFI is able to provide/expand its services below the rates of its competitors, or if the proposed funding packages (and TA) will lead to a reduction of costs to clients.

STRENGTHENING RESPONSIBLE LENDING BEYOND DUE DILIGENCE

Beyond the assessment during the DD, impact investors should engage in a process to help MFIs to strengthen their responsible lending practices. One way to do this is to require potential investees to sign a commitment to gradually implement the under the Client Protection Pathway launched by CERISE+SPTF in 2021 (see Box 5). Overall, the number of CPS-certified institutions is still limited compared to the total universe of MFIs, and several of the certifications have expired.55 Therefore, potential investees should be encouraged to sign up to these principles and pursue (or renew) their certificate. This may be agreed under a loan covenant and may be assisted through TA to implement the necessary internal policies and processes.56 In case loans are disbursed in tranches, follow-up disbursement could be subject to progress along agreed milestones.

In recognition of the need for collective action for mainstream responsible lending, in October 2022, over 40 impact investors, DFIs, bilateral funding agencies and microfinance networks signed a Joint Statement calling on financial services providers to join the Client Protection Pathway.

55 As of 23 March 2023, of the 164 MFIs that underwent certification so far, 45 have active certificates of which 34 for expire during this year.
56 The SPTF Resource Center offers several guides, templates, and case studies to support the implementation of the Universal Standards including on dimension 4 “Treat Clients Responsibly” (which includes transparency) and dimension 6 (Balance Social and Financial Performance).
57 CERISE+SPTF Joint Statement. https://onedrive.live.com/?authkey=%21ADCW5wG3F4yh3qM&cid=D19206690409C20D&parId=D19206690409C20D%2134879&resx=OneUp
CERISE+SPTF’S CLIENT PROTECTION PATHWAY

Since 2021, CERISE+SPTF offers providers to engage in the Client Protection Pathway composed of three steps: during the first step, the provider signs a commitment to implement the Client Protection Standards (CPS) based on an assessment of its current state of practice vis-à-vis the CPS, either through a self-assessment tool or a qualified service provider. During step two, the provider develops and implements a clear roadmap/action plan on how to progress towards the full implementation of the principles. Step three consists of an external certification by accredited certifying bodies. Cerise+SPTF has worked with rating agencies and sector experts to develop a new Client Protection Certification Framework. Depending on the level compliance, providers are granted bronze, silver and gold certificates which are valid for three years.


If an MFI investee has minimum acceptable levels of transparent and responsible pricing and a commitment to improve, for example, by engaging on the client protection pathway, TA provided by the impact investor can have a catalytic effect in terms of enhancing the impact of the investment. It may help the MFI to implement its commitments under the loan covenants and address specific issues to enhance its capacity to fully implement responsible lending practices and reduce its costs and interest rates charged to its clients. Such TA could cover the following areas:

- upgrading technology: especially for digitizing loan applications, using digital payment channels, and improving client risk assessment;
- strengthening product pricing, based on better analysis of costs and risks and of the impact of different interest rate levels on clients’ profitability and ability to pay;
- strengthening agricultural loan appraisal through tech cards and systematic data collection on gross margins of the main crop and livestock activities funded, potentially combined with scoring systems and risk assessment based on satellite data, and related staff training;
- improving operational processes and efficiencies along lending cycle;
- conducting client satisfaction surveys and studies to better understand the impact of the loan products along various dimensions which provides evidence for the Impact Fund and MFI and can feed into product and process improvements.
References


CGAP. 2007. CGAP Reflections on the COMPARTAMOS Initial Public Offering. A case study on microfinance interest rates and profits. Focus Note 42.


Annex 1
Which loan would you choose?

<table>
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<tr>
<th></th>
<th>Zero interest loan</th>
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<td>40% declining&lt;sup&gt;60&lt;/sup&gt;</td>
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</table>


<sup>58</sup> Percentage of loan amount taken as a security deposit but on which interests are charged.

<sup>59</sup> Monthly interest rate charged on the full loan amount irrespective of the repayment of principal.

<sup>60</sup> Annual interest rate charged on the outstanding loan principal (which is declining during loan repayment).
Annex 2
Average Operating Expense Ratio by loan size as percentage of GNI per capita

Interest rates have been a contentious issue in microfinance for many years. While higher interest rates for microloans are often justified by the underlying costs of making small loans in rural areas, this is not always the case. This issue is especially relevant for impact investors such as impact investment funds and development finance institutions that fund microfinance institutions (MFI) to expand lending to smallholder farmers and other micro-borrowers in the agrifood system. Questions about the adequacy of interest rates charged by MFIs targeting farmers often arise during the due diligence (DD) process and can provoke animated discussions during investment committee meetings. The frequency and intensity of these debates at multiple investment committee meetings of impact investment funds co-financed by the European Commission actually prompted the idea to produce this technical guide. This toolkit provides guidance on how to analyse interest rates of MFIs from a responsible lending perspective and how to strengthen responsible lending practices more broadly. It is mainly targeted at impact investors and other financiers with a double-bottom line investing in MFIs as part of their broader development and impact mandates. It may also be useful for a broader audience concerned with micro- and agricultural finance and rural development, including international financing institutions (IFIs) and other development practitioners. This publication is part of the Investment Toolkits series under the FAO Investment Centre’s Knowledge for Investment (K4I) series.