

# Is the Credit Worth it? For Profit Lenders in Microfinance with Rational and Behavioral Borrowers<sup>1</sup>

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## 1. Introduction

In recent years there has been an increase in the entry of for-profits in the microfinance industry even though the majority of borrowers continue to be served by non-profits (see Figure 1). This trend has raised some concerns whether this will cause the mission of microfinance drift away from poverty alleviation to profit-maximization. This is well captured by Muhammad Yunus: “Commercialization has been a terrible wrong turn for microfinance, and it indicates a worrying “mission drift” in the motivation of those lending to the poor. Poverty should be eradicated, not seen as a money-making opportunity.”<sup>2</sup>

Some of these concerns are grounded in controversies of some practices that commercial MFIs are alleged to be using, including putting excessive pressure on borrowers to ensure timely repayment and profiteering at the expense of poor borrowers. There is also concerns that borrowers are “over-borrowing”, often from multiple MFIs, and getting into a debt trap. From the question how to make poor borrowers credit worthy, the discussion seems to have shifted to, is the additional credit really worth it for them.<sup>3</sup>

Some of the MFIs that have attracted negative attention from the press include SKS in Andhra Pradesh, India, Banco Compartamos of Mexico, LAPO of Nigeria.<sup>4</sup> All of this seemingly contradicts the original purpose of the MFI movement, namely making capital accessible to the poor to lift them out of poverty.

While the discussion has been mostly about “commercialization”, there is an implicit assumption that these lenders enjoy some market power, for example, in Yunus's statement that microcredit has “[given] rise to its own breed of loan sharks.”<sup>5</sup> This critique is acknowledged within the MFI sector and has led to calls

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<sup>2</sup> “Sacrificing Microcredit for Megaprofits,” the New York Times, January 14, 2011.

<sup>3</sup> See Sinclair (2012).

<sup>4</sup> See, for example, MacFarquahr, New York Times, April 13, 2010

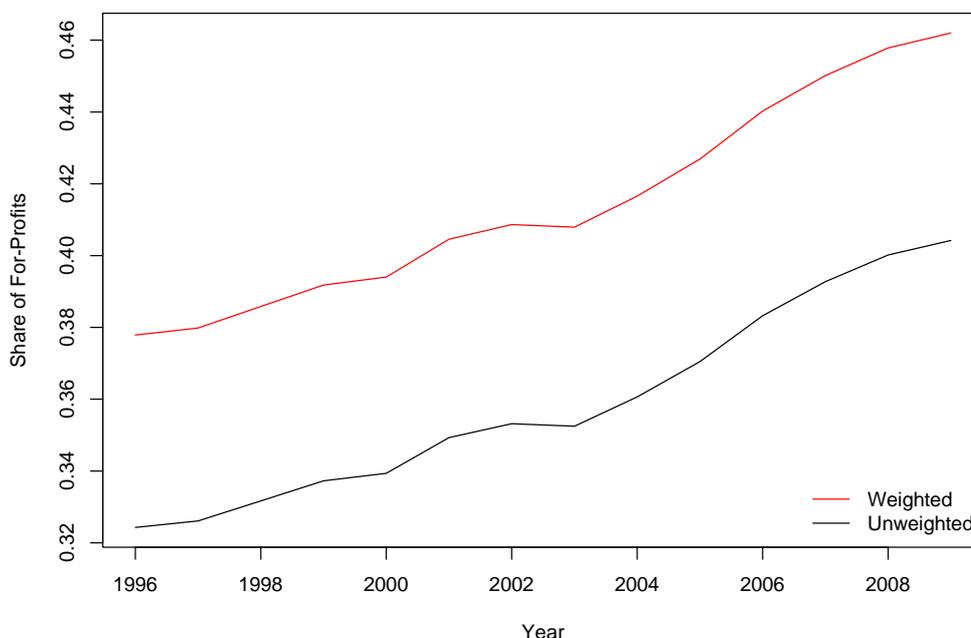
<sup>5</sup> The New York Times, 14th January 2011.

for tougher regulations, for example, a new legislation, entitled the “Micro Finance Institutions (Development and Regulation) Bill” being tabled in the Indian Parliament.

These debates also raise a sharp contrast with much of the existing microfinance literature, both theoretical and empirical, which has typically assumed lenders to be non-profits or to operate in a perfectly competitive market, and which more generally ignores the issue of market structure in considering the welfare effects of microfinance. Most of this work has studied the remarkable repayment rates achieved by MFIs. In a world where lenders are not necessarily acting in the best interests of borrowers, we need to look beyond repayment rates.

The existing literature has typically adopted a framework that has three key features: first, lenders are assumed to be a benevolent non-profit who try to maximize borrower welfare subject to some break even constraint; second, a partial equilibrium framework that focuses on one MFI and a given set of borrowers, and third, borrowers are “rational”, i.e., have time-consistent

**Figure 1: Share of for-profit lenders over time**



Notes: Figure taken from de Quidt et al. (2013). We take the MIX Market dataset for 2009 and use institution establishment dates to construct a panel of MFIs for each year from 1996. We classify MFIs by their reported legal status (for-profit or non-profit) in 2009. “Weighted” weights each MFI by its number of loans outstanding in 2009, thus giving the fraction of all loans issued by for-profits. “Unweighted” uses the simple number of institutions, showing the relative increase in the number of for-profits.

preferences and are not subject to any behavioral biases.

We argue that a lot of the issues these debates have thrown up require looking at the motivation and objectives of lenders and borrowers more carefully, as well as paying greater attention to the broader market and institutional environment within which a MFI operates. This would allow us to evaluate borrower welfare looking beyond repayment rates. In particular, it would push us to look at the

types of loans offered, the interest rates, as well as the impact on non-borrowers, e.g., by looking at the extent of credit rationing and general equilibrium effects via wage rates. This would complement the current empirical research agenda that correctly focuses on what uses the loans are actually being put to, what changes in the design of the lending programs would serve the stated objectives better, and what are the effects on the income and alternative measures of well-being of borrowers (see the review article by Banerjee, 2013).

We break the discussion in this paper into two broad sections. In the first, we consider the importance of market structure and for-profit lending in standard models of rational borrowers. In the second, we turn to recent research exploring the consequences of “irrational” borrowers, that is, those subject to behavioral biases.<sup>6</sup>

Our discussion of rational borrowers focuses on two core issues. Firstly, we describe how market structure matters for borrower welfare of the types of loan contracts offered by MFIs, when we relax the standard assumptions of perfect competition or (a particular form of) benevolent non-profits, (retaining the assumption of rational borrowers, which we relax in the second half of the paper). Secondly, we outline some issues drawn from the literature on non-profit enterprises and motivated agents, and discuss how they apply to the context of microfinance, in particular setting an agenda for an area we feel is ripe for more research. We finish with a very brief discussion of credit bureaus.

Moving to irrational borrowers, we discuss three key issues. Firstly, we describe how non-standard time preferences, or “present bias” interact with borrowing and saving behavior, and how the market responds. The news is not good: the welfare of present biased borrowers and savers is maximized when the contract incorporates some form of commitment against over-borrowing or under-saving. However, in general the market will fail to provide such commitment, especially when the decision-makers are naïve about the extent of their bias. Next, we discuss framing, in particular how the use of a particular method for calculating interest rates is widespread in microfinance and might lead borrowers to misperceive the cost of borrowing. Again, competitive pressures seem unlikely to resolve these issues, although some countries, such as India, have had success with regulation of the microfinance sector. Lastly, we turn to the question of whether borrowers are aware or misinformed about the terms of their contracts, and whether firms have incentives to inform them, finding once again that for-profit firms have weak or missing incentives to do so. In parallel with the first section, we discuss how non-profits may be able to resolve some of these problems. To round off the discussion, we briefly present evidence from data collected by Microfinance Transparency that reveals cross-country differences in the transparency and terms of loan contracts.

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<sup>6</sup> We also refer the reader to the reviews by Zinman (2013), Bryan et al. (2010), and the books by Spiegler (2011) and Bar-Gill (2012) which touch on many of the issues discussed here.

## 2. Contracting with rational borrowers

The role of credit market imperfections in potentially trapping individuals and economies in poverty has been one of the most active areas of research in development economics. The convergence-oriented worldview of economic growth poses that if capital scarce then marginal returns are high and so either savings or capital inflows via the credit market would help remove the shortage. But in the presence of credit market frictions, the poor face tougher terms in the credit market, whether it is the likelihood of getting a loan, the size of the loan, or the interest charges. This has to do with the peculiar nature of credit as a commodity. When someone "buys" credit, unlike spot transactions such as buying an apple, all that the lender gets in exchange of giving out money is a promise (to pay back in the future). Richer borrowers can make this promise more credibly than poorer borrowers, since they can offer collateral. But a large fraction of the population in developing countries is poor & do not own *any* assets. It is in this context that the rise of microfinance has to be located.

The key innovative feature of microfinance, as exemplified by the Grameen Bank of Bangladesh is the group-based lending methods, which economists think is a key to its success. Members of a community know more about one another than an outside institution such as a bank. Also, while a bank cannot apply financial or non-financial sanctions against poor people who default on a loan, their neighbors may be able to impose powerful non-financial (e.g., social) sanctions at low cost. Therefore, an institution that gives poor people the proper incentives to use information on their neighbors and to apply non-financial sanctions to delinquent borrowers can out-perform a conventional bank. Much of the microfinance literature has shown how joint liability lending can be used by MFIs can leverage borrowers' social capital and local information to lend to individuals otherwise not considered creditworthy and increase their welfare (see Ghatak & Guinnane, 1999, for a review).

An important assumption in this literature is that lenders are non-profits or perfectly competitive and therefore, all the gains from relaxing incentive constraints through group-based lending accrue to the borrowers in the form of a higher chance of getting a loan, a larger loan size, or a lower interest rate. In this section, we study the consequences of relaxing this assumption.

### 2.1 Market structure

Our recent research (de Quidt et al. 2013) analyzes the consequences for interest rates, contract structure and borrower welfare, of for-profit lending in microfinance, with and without market power, compared to a benevolent non-profit maximizing borrower welfare that is subject to a break-even constraint. It turns out that when the lender is a for-profit with market power, and the outside options of borrowers are poor so that they earn a "surplus" in the relationship (or put technically, their participation constraints are slack), he can instead leverage these ingredients to extract higher rents at the borrowers' expense. In particular, borrowers with more social capital may be worse off than those with less, and therefore this potentially might damage social capital formation, or destroy existing social capital. However, given that borrowers are credit constrained and

have very few outside options, they are better off borrowing than not borrowing, and they are better off borrowing under joint liability (when the lender chooses to use it) than under individual liability.

Competition between for-profit lenders can close down this channel, but it has an ambiguous effect on borrower welfare due to an information asymmetry: competition undermines borrowers' incentives to repay their loans and thus leads to credit rationing. One of the interesting trade-offs that emerges therefore is that of rent extraction under monopoly with the enforcement externality under competition. Lastly, for-profit lenders—both with and without market power—inefficiently under-use joint liability relative to the altruistic non-profit benchmark. The latter use joint liability whenever it is socially efficient, but the former use it only if it is profit-maximizing relative to using individual liability. Since joint liability is associated with tighter repayment incentive constraints (because larger amounts are due, when a group member is unable to pay her loan), it is relatively less attractive to for-profit lenders. This suggests that some of the observed changes in the lending patterns - for example, a decline in joint liability loans relative to individual liability loans (see for example the discussions in Giné & Karlan, 2013 and de Quidt et al. 2013) may indeed be related to changes in market structure, e.g., increasing commercialization. This result is also consistent with the evidence presented in Cull et al. (2009) and de Quidt et al. (2013) that non-profits tend to use group-based lending methods, whereas for-profit lenders tend to use individual-based lending methods.

Our approach follows a recent literature in development that moves away from focusing on credit contracts in a purely partial equilibrium setting and pays greater attention to the role of market structure. For example, Besley, Burchardi, and Ghatak (2012) show that improving collateralizability of assets relaxes credit constraints in a competitive setting, as argued by Hernando de Soto. However, if the lender has market power then a rent-extraction versus efficiency trade-off emerges as in the study just described, and in the limit (formally, when the borrowers' participation constraint is not binding) borrowers could be made worse off by such reforms with no concomitant efficiency gains. The lenders will simply use the additional ability to extract more surplus, without changing loan size or the interest rates. Using a different framework Genicot and Ray (2006) make a similar point.

In de Quidt et al. (2013) we use a simple simulation exercise to explore the consequences of different market structures for borrower welfare. We parameterize the model using parameters estimated from the MIX Market dataset of financial information from MFIs around the world, and existing research. First, we find that forcing the monopolist to use JL when he would prefer IL increases borrower welfare by a minimum of 12% and a maximum of 20%. However, switching to a non-profit lender delivers a much larger welfare gain of between 54% and 73%. The qualitative sizes of these effects result are robust to alternative parameter values. Second, we find that despite its effect on undermining repayment incentives, competition delivers similar borrower welfare to the non-profit benchmark. Taking these results together suggests that regulators should be attentive to lenders with market power, but that fostering competition rather than

heavy-handed regulation can be an effective antidote. Third, we confirm that for our parameter values, the non-profit lender is indeed more willing to use joint liability lending methods than the commercial lenders.

Our findings suggest that Yunus appears to be correct to be concerned about abuses by for-profit lenders: particularly in South Asia, where Grameen is based, our model predicts considerable *scope* for abuse of market power by for-profit lenders. However, as a whole, interest rates in South Asia are close to our predictions for a non-profit lender, weakening the case for concluding there is systemic abuse in *practice* in this region.

## **2.2 Not-for-profit microfinance**

An important issue in the commercialization and market power debate more generally is the relative role of for-profit and non-profit lenders.

A lot of media attention focused on the use of seemingly coercive loan collection practices, that normally would appear to be the preserve of moneylenders. Indeed, as quoted above, Muhammad Yunus argues that commercialization led to aggressive marketing and loan collection practices in the quest for profits. We can view coercive loan collection practices as any form of non-pecuniary cost imposed on the borrower, which may or may not be costly to the lender. Coercion is inherently non-contractible, while the interest rate is contractible. A for-profit lender may not be able to commit not to use coercion to reclaim the full payment even when it would impose a great cost on the borrower, whereas non-profits may be able to commit not to use coercion as they do not face high powered incentives, may be intrinsically motivated (e.g., by attracting motivated loan officers), or more worried about maintaining their reputation with donors.

For-profits might be more efficient than non-profits in terms of cutting costs of operations, being able to raise capital, and reaching out to more borrowers. However, they are less likely to reach out to poorer borrowers whose projects may have lower financial returns, but targeting whom with the objective of poverty alleviation is one of the main supposed goals of the microfinance sector. This relates to a much broader literature on non-profits and social enterprise beyond microfinance.

The main general argument in favor of non-profits is that because financial incentives are muted, they are less likely to pursue narrow profit maximization at the expense of other social goals. In the literature on non-profits, this often takes the form of a cost-quality trade-off—see Glaeser & Shleifer (2001). This often takes the form of multi-tasking argument, akin to Holmstrom & Milgrom (1991). For-profits have high-powered incentives and therefore likely to choose actions that increase revenue or cut costs, sometimes at the expense of non-contractible quality. Nonprofits do not face high-powered incentives and as a result less likely to undermine the social mission. Non-profits also may have a comparative advantage in attracting in motivated agents as loan officers or managers (see Besley & Ghatak, 2013). However, non-profits are less likely to be motivated by financial considerations and that may raise the cost of their operations, which in turn may put them at a disadvantage in commercial capital markets.

Now the social goals of a non-profit MFI can take a variety of forms. For example, reaching out to borrowers who are not creditworthy are not financially literate is unlikely to be worthwhile to for-profit lenders because of the fixed costs involved compared to the small amounts of profits that could be made out of lending to such borrowers, and the fact that after becoming financially literate they could switch lenders, similar to the issue of firms providing training to workers. It could also involve not using coercive methods to extract timely repayment. Non-profits also may be less likely to push loans that may not be in the best interest of the borrower, as we discuss in the next section. Also, while lending to the poor is likely to bring higher average costs (for example, due to smaller loan sizes and higher collection costs), attracting motivated loan officers, often from the same location as the borrowers, is likely to act as a countervailing force keeping costs down.

However, as mentioned above, non-profits are not without cost. First of all, they are less likely to impose discipline on borrowers. Second, they are likely to approach borrowers who are poorer and who have projects with low immediate financial returns. Both these factors are likely to push up their costs. Cull et al. (2009) find that for-profit lenders tend to target wealthier borrowers, give out larger loans, and average costs fall with loan size, although note that these are simple cross-sectional correlations, so one should be cautious in making causal inferences.

### **2.3 For-profits, non-profits, and Competition**

The discussion above so far is purely partial equilibrium, considering one lender only. Once we look at market equilibrium where non-profits may compete with for-profits or other non-profits, several additional issues emerge.

Returning to the issue of coercive loan collection practices that we started this section with, an important issue is in a competitive market, the borrower's participation constraint will be binding, and then there may be a co-existence of for-profits who charge lower interest rates but cannot commit not to use any coercion and non-profits who have higher interest rates (since they have a lower incentive to cut operational costs or ability to tap commercial deposits) but do not use coercion. However, monopolists may be better able to commit to certain types of contracts, whereas competition may lead to a race to the bottom and therefore, the welfare effects of market structure in general would be more complex.<sup>7</sup>

Turning to other effects of competition, McIntosh & Wydick (2005) show that, faced with competition from other lenders for their borrower pool, non-profits will be less able to pursue their social goals which are often achieved by the higher productivity, less poor borrowers cross-subsidizing the poorer borrowers.

Moreover, for-profit lenders have stronger incentives to identify those borrowers who will make most efficient use of the funds and target them, at the expense of the less efficient borrowers. In essence, there is an equity/efficiency trade-off, and

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<sup>7</sup> See, for example, the discussion of competition and non-profits in the "irrational borrowers" section.

achieving equity may especially sacrifice the enterprise growth of the best borrowers; these potential dynamic inefficiencies are hard to quantify but there is an emerging consensus that microfinance has not performed well in encouraging enterprise growth. See Banerjee (2013) for further discussion.

Lastly, we note that it is easy to see how the diverse motivations of non-profits could lead to inefficient excess entry. Many organizations appear to be motivated to maximize *their own* outreach or impact on poverty, rather than being primarily interested in outreach and poverty reduction in general. Meanwhile, in the absence of a transparent measure of efficiency to direct their funds—such as profit, which the organization may be prohibited from distributing—donors or financiers may have difficulty identifying the most efficient organizations. Non-profits may also face favorable regulatory treatment. As a result, the lender might choose to enter a market when the welfare-relevant objectives, such as poverty reduction, could be more efficiently met by a different organization. See e.g. Ghosh & Van Tassel (2013) for a related discussion.

An important issue in this context is the informational and enforcement externality across lenders in the presence of competition. As Hoff & Stiglitz (1997) show in the context of individual loans and de Quidt et al. (2013) show in the context of group and individual loans, if lenders are uncoordinated and do not share information, then competition leads to potential inefficiencies. For example, the “dynamic incentive” threat of denying future credit loses its bite to some degree. To offset this tightening of incentive constraints, lenders have to be more selective, invest more in screening, and introduce some degree of credit rationing.

In this context, it is worth mentioning briefly the small literature on credit bureaus in microfinance.<sup>8</sup> Much of the existing work primarily concerns adverse selection issues—credit bureaus help banks to screen out bad types. They also play a role in enforcement frameworks such as ours: credit bureaus enable lenders to damage a borrower's reputation following default, reducing her access to credit from other lenders and thus increasing repayment incentives. However, what is the incentive of lenders, for-profit or non-profit to agree to stick to a policy of not lending to borrowers who have a bad history with a credit bureau is a non-trivial question, as is known from the work of Greif (1989, 1993).

## 2.4 Summing up

What are the key concerns about for-profit lending or commercialization in the context of borrowers without behavioral biases? We have discussed three main points. First, policymakers should be conscious of the market structure, especially market power which can have large effects on borrower welfare, as well as lead to inefficient under-use of certain types of contract. They should not be lulled into a false sense of security by existing discussions that typically focus on non-profits or competitive lending. This general point is also illustrated by work showing how property rights reform—enhancing borrowers’ ability to put up collateral for loans—may actually make them worse off in the presence of market power.

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<sup>8</sup> See e.g. De Janvry et al. (2010), Frisancho (2012) and McIntosh et al. (2013).

Second, we argue that non-profit MFIs may have an important role to play. The muted financial incentives that they face can enable them to extend financial services to borrowers that would not be served by for-profits, and may also reduce the use of coercive lending practices. This needs to be weighed against the potential efficiency gains to be had from access to large-scale commercial finance (which may be more easily accessible to for-profits), and the fact that serving poor borrowers might require a cross-subsidy from wealthier borrowers, constraining their income or enterprise growth. All of these issues are presently under-studied in the microfinance context.

Third, we discuss work that illustrates that competition does not come without cost. Without information sharing between lenders, competition can lead to credit rationing and inefficiencies as borrowers incentives to repay a given lender are weakened. One set of simulation results suggests that these welfare costs may not be too large, but more work is needed.

### **3. Contracting with Irrational Borrowers**

When borrowers are subject to behavioral biases, their observed behavior departs from what the standard rational borrower framework, discussed in the previous section, would suggest. With rational borrowers, if there are no supply side frictions (e.g., market structure, informational problems, transactions costs) then one would expect competitive markets to achieve an efficient outcome. That will no longer be the case with borrowers who are “irrational”. To attract business a seller has to design products that will appeal to consumers which they believe is best for them, whether those beliefs are correct or not. Otherwise, they will go to another lender.

Obviously, we would expect the role of various factors that affect loan supply discussed in the previous section to interact with these behavioral biases in interesting ways. A fundamental issue from a welfare perspective would be that the trade-offs that are normally thought to guide the borrowers’ choices, no longer correspond to her “true” preferences and “correct” beliefs.<sup>9</sup> For instance, a borrower suffering from weak self-control may take a loan at time zero, hoping to repay in some future period, only to find that her future self instead chooses to roll over the debt at high cost. In other words, with borrowers with behavioral biases, *inter alia*, over-borrowing becomes a problem whereas with rational borrowers, the problem is usually under-supply.

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<sup>9</sup>The issue of how to measure the welfare of behavioral agents is contentious, and a detailed treatment is well beyond the scope of this article. Except where indicated otherwise, we will follow the common convention of treating the preferences of the agent in period zero, that is, the choices she would like to be implemented if she could commit her future self and/or had correct beliefs, as her “true” preferences. Many sources give a good discussion of these issues, see for example Spiegler (2011) who also expands on many of the issues touched on in this review.

A growing literature is concerned with whether exposure to markets corrects or exacerbates an individual decision maker’s (e.g., consumer, worker, borrower) biases. DellaVigna and Malmendier (2004) write:

In the absence of firms, as long as the agents themselves select the tasks they perform, small deviations from rational expectations generate unnoticeable differences in behavior and welfare. In a market setting this conclusion need not hold. The firms, aware of the consumer deviations from rational expectations, offer contracts that are explicitly designed to target the deviations, no matter how small. Consumers, therefore, face selected tasks that systematically magnify the effect of their biases.

In this section we review theory and evidence on three particular issues relevant to microfinance. Firstly, we discuss how behavior of present biased borrowers in credit markets differs from the standard model, and how lenders respond. Secondly, we discuss the presently less-studied issue of framing, where we reference the debate on how interest rates are presented to borrowers. Thirdly, we discuss how institutions may deliberately misinform or under inform their customers about the terms of the contracts they are signing. Where possible we link each topic back to relevant evidence from developing countries and key debates in microfinance, as well as referring to the more plentiful empirical work in developed countries.

### 3.1 Present Bias

Since the purpose of credit is to exchange future for present consumption, the issue of non-standard time preferences among borrowers has naturally attracted considerable attention. The benchmark model is of a present biased quasi-hyperbolic discounter with “Beta-delta” preferences (Laibson 1997; O’Donoghue and Rabin 1999).<sup>10</sup> Such an agent is more impatient in current decisions (today versus tomorrow), than in future decisions (30 days’ time versus 31 days’ time). In other words, such an agent always prefers the present relative to the future, but considers two future periods that are separated in time like a classical agent. As a result, her preferences are time-inconsistent: today she may wish to repay a loan in the future, but when the future arrives she instead chooses to default or refinance the debt, contrary to her original preference.

Our discussion of these issues uses the model of DellaVigna and Malmendier (2004) as its basis. In this model, firms supply either “temptation goods” or “investment goods” to present biased consumers. The firm and consumer sign a contract that charges an up-front fee, and a per-use fee in future periods. Temptation goods (e.g., credit) come with immediate benefits and deferred costs: left to her own devices, the present biased consumer will borrow more in future periods than she would ideally like to given her preferences today. Investment goods (e.g., savings) come with immediate costs and deferred benefits: she will

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<sup>10</sup> Formally, her discounted utility in period zero from consumption path  $\{c_t\}_{t=0}^{\infty}$  is  $U_0 = u(c_0) + \beta \sum_{t=1}^{\infty} \delta^t u(c_t), \beta < 1$ .

save less in future periods than she would ideally like to given her preferences today.

When thinking about market provision, there are two key ways in which market structure affects the provision of such contracts. The first is the existence of “ex-ante” competition, that is, competition between firms at the time the contract is signed, to offer the contract the consumer most prefers today. For instance, if a credit bureau exists, borrowers may not be able to borrow from more than one lender, so once the contract is signed the borrower is tied to their current lender. The second is “ex-post” competition (or exclusivity), that is, competition from new providers after the contract has been signed.<sup>11</sup>

In a market setting, it is not primarily a decision-maker’s present bias *per se* that is the problem, but naïveté about it. A “sophisticated” present biased decision-maker is fully aware of her tendency to procrastinate or change her mind in the future.<sup>12</sup> Since it is in the firm’s best interest to offer her a contract that suits her current preferences, contracts will typically be offered that incorporate some form of commitment. In the context of up-front and per-use fees, this implies that credit should come with relatively low up-front fees, and high per-use fees (e.g. interest rates on subsequent loans or refinancing) that discourage inefficient refinancing.<sup>13</sup> Savings accounts should come with relatively high up-front fees, with low per-use “fees” (i.e. high interest paid on savings balances) that discourage inefficient under-saving.<sup>14</sup>

However, when decision-makers are naïve, or partially naïve (O’Donoghue and Rabin 2001), they incorrectly believe that in the future they will be less present biased than they in fact will turn out to be.<sup>15</sup> Now she has two problems: her choices are time-inconsistent due to her present bias, and she under-demands commitment, due to her naïveté about her present bias. Lenders still charge low up-front fees, and high fees for default or refinancing of debts (DellaVigna and Malmendier, 2004; Heidhues and Köszegi, 2010; Bubb and Kaufman, 2009).

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<sup>11</sup> We will also consider renegotiation (where the current provider offers to replace the existing contract with a new one) as a form of ex-post competition, where in some sense the lender is competing with his past self.

<sup>12</sup> Formally, she knows that when making choices in any future period she will discount the future according to  $\beta\delta$ , exactly as she does today.

<sup>13</sup> That is, inefficient from the period zero self’s perspective.

<sup>14</sup> There is another sense in which time-inconsistent agents over-borrow (or under-save). In the same sense that the agent period zero has a preference over how her future “selves” will behave, we can imagine another level of meta-preference where she has a preference for all selves, including the present one, to discount the future with the constant “time consistent” discount factor  $\delta$ . Indeed this is a commonly used alternative welfare measure to the one we primarily consider. Since her period zero self actually discounts all future periods additionally by  $\beta < 1$ , she borrows too much (or saves too little) in period zero with respect to this welfare measure.

<sup>15</sup> Formally, a partially naïve decision-maker knows that she will have beta-delta preferences again in future periods. However, she incorrectly believes that her “beta” will be equal to  $\hat{\beta} > \beta$  in all future periods, and therefore she believes she will be less present biased in the future than she is today. A fully naïve decision maker believes she will not be present biased at all in future decisions (i.e.  $\hat{\beta} = 1$ ).

However, unlike the sophisticate, the naïve borrower underestimates her proclivity to use the refinancing option or incur late fees in the future, and therefore overvalues the contract at the time of signing: her participation constraint does not correspond to her “true” welfare because of her biased beliefs. The refinancing cost turns out to be *too low* to discourage her from refinancing inefficiently.<sup>16</sup> In the microcredit context, this may relate to the commonly cited concerns about repeat borrowing, see also further discussion below.<sup>17</sup>

One can also apply the same model to provision of saving accounts. The optimal contract involves low opportunity cost of usage (e.g., high interest paid on deposits, low transaction costs through mobile banking, or commitment features that penalize missing deposits), financed by relatively high up-front fees (account set up costs). The challenge for saving account take-up is that naïve individuals underestimate their future temptation to under- or dis-save, and therefore undervalue the optimal contract. In addition, by under committing themselves they may subsequently incur penalties when they violate the terms of their commitment contracts. One might be particularly concerned about for-profit finance institutions deliberately designing “commitment” accounts to maximize dropout and penalties.

The above concerns are stark when the lender is a monopolist. He deliberately tilts the contract design to exploit the naïve borrowers’ biases: they pay their up-front fees and then borrow/refinance more or save less than they anticipated at sign-up. Moreover, the up-front fees will be structured to extract as much as possible of the borrower’s expected rents under the contract. Since she incorrectly anticipates her usage, she actually might be made worse off accepting than rejecting the contract from her period zero self’s perspective; more formally, if it were not for her biased beliefs the decision-maker’s participation constraint would not hold.

Of particular concern to economists is that competition typically will not rid such consumers of their biases. Consider first the presence (or not) of ex-ante competition. DellaVigna and Malmendier (2004) show that while ex-ante competition eliminates the lender’s rents, such that sophisticates receive the optimal contract, the competitive contract still involves inefficient mispricing of debt renewal when decision-makers are naïve. The reason is that naïve decision-

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<sup>16</sup> Eliaz and Spiegler (2006) analyze a closely related model and show that when decision-makers are heterogeneous in their naïveté, a monopolist will offer a menu of contracts that separates the sophisticates (who receive an efficient contract), and “exploits” the naïve agents.

<sup>17</sup> In the context of microfinance, Fischer and Ghatak (2010) specifically addresses an unusual feature of microcredit contracts, that they tend to require high-frequency, small repayments, despite these carrying significant transaction costs. This is consistent with Mohammad Yunus’ observation that “it is hard to take a huge wad of bills out of one’s pocket (to) pay the lender. There is enormous temptation (...) to use that money to meet immediate consumption needs.” It can be shown theoretically that the maximum loan a sophisticated present biased borrower can be induced to repay is larger when she is making small, frequent repayments, because the painful repayment “now” is smaller relative to the benefit “later”. Although not analyzed in the model, an interesting extension would be to explore whether for-profit lenders would choose a repayment structure that enables them to sell inefficiently large loans to borrowers.

makers do not correctly forecast their future borrowing at the contract signing stage (due to their biased beliefs), so the competitive equilibrium contracts maximize utility from forecasted consumption, rather than from actual consumption.<sup>18</sup> Although evidence on loan pricing is scarce, the received wisdom is that a the typical MFI depends on or even explicitly requires repeat borrowing, for example extending follow-up loans before the current one is fully repaid; it does not seem too much of a stretch to imagine that many borrowers take a loan intended to be a one-off, but ends up taking two or three more after paying off the first.<sup>19</sup>

The ability of the firm to supply commitment, whether to naïve or to sophisticated borrowers, also depends on the nature of ex-post competition. For example, borrowers may be able to top up their loans elsewhere, or switch lenders mid-contract by borrowing from B to repay A.<sup>20</sup> In the case of the temptation good, credit, commitment requires pricing rolled-over debts above marginal cost. Köszegi (2005) and Gottlieb (2008) show that when there exists a spot market for debt, it is not possible for firms to charge above marginal cost in later periods, preventing them from offering this form of commitment. Then, to provide commitment the firm needs to be able to impose switching costs, such as fees for transferring balances to another provider.

This suggests that credit bureaus may have a role to play in enabling lenders to offer contracts that help their borrowers self-commit not to over-borrow. In the microfinance context, where credit bureaus are typically weak or non-existent, issues of non-exclusivity and multiple borrowing are commonly cited as major concerns. This was an issue that came up a lot, for example, in the aftermath of the 2010/11 crisis in Andhra Pradesh, India.

Gottlieb shows that investment goods (in this context, think again of savings) in general are not vulnerable to this problem, since the firm prices below marginal cost for usage (e.g. high interest rates on savings deposits), so a spot market for the investment good cannot attract the consumer away. However, in the case of savings there is another way that commitment can be undermined, via the ready availability of credit.<sup>21</sup> Credit enables the consumer to meet her “savings” commitments (e.g. a monthly deposit into the account), while simultaneously consuming today the future proceeds of that deposit (see Laibson, 1997).

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<sup>18</sup> The same problem arises in Heidhues and Köszegi (2010)’s model.

<sup>19</sup> Most theoretical work that models dynamic incentives (threat of termination of future credit lines following default) requires the borrower to have an ongoing demand for credit in the future. In a model of productive investment in the presence of saving constraints, such demands can arise optimally to finance working capital. However, it is clearly not optimal to borrow continually at high interest rates in a consumption-smoothing model unless very significant income growth is expected in the future.

<sup>20</sup> Alternatively, in the absence of credit bureaus and information sharing between lenders, she may be tempted to default on her current loan and take a new loan from another lender. To the extent that she believes this will be possible in the future, this will reduce the expected cost of borrowing or refinancing, and therefore makes borrowing more tempting.

<sup>21</sup> In some sense, it is a puzzle why the commitment accounts in e.g. Ashraf, Karlan, and Yin (2006) were so successful.

This may be one explanation for why commitment savings products are currently much less widespread than credit products. In addition, it suggests that some microcredit borrowers may be “borrowing to save,” using the rigid structure and regular installments of a credit contract to expensively substitute for a commitment savings account, albeit one that pays out at the beginning of the deposit stream rather than the end (Rutherford 2000; Bauer et al. 2012). If this behavior is common it could lead to a missing market for commitment savings since for-profit MFIs will have strong incentives to focus on providing credit.

In this context it is worth mentioning rotating savings and credit associations (ROSCAs), which take a middle ground between savings and borrowing. These consist of a group of individuals who meet at regular intervals, and contribute a fixed amount to a collective “pot,” which is then allocated to one of the members according to some fixed or random order (sometimes decided by participants bidding to receive the money early in the cycle in return for receiving a smaller amount). Within the cycle each member gets to draw the pot exactly once. Early recipients are effectively borrowing from the group, while late recipients are effectively saving up, although with repeated cycles this distinction becomes blurred. In developing countries these are a popular scheme to purchase indivisible goods. They may help provide commitment through social pressure to make one’s contributions even if one has a long time to wait to receive the pot, or already has received it.

In fact, Basu (2011) shows that ROSCAs can be viewed as a commitment saving device even in the absence of social pressure. The intuition is that although a present biased participant is tempted to drop out of the ROSCA after receiving the pot (i.e., defaulting on her future contributions), she wants to commit her *future* self to save, by contributing to future ROSCA rounds. If she drops out, she will be banned from participating in future rounds, and so will be unable to commit her future self to save. A corollary is that the commitment power of ROSCAs will still be vulnerable to competition from other ROSCAs (she can drop out and join a new group) or ready credit availability (she can borrow while continuing to meet her ROSCA contributions).

Even without problems with ex-post competition between lenders, there is still a possibility of renegotiation within the contract; for instance the borrower could initially sign up to restrict her future borrowing, but a for-profit lender will gladly renegotiate this commitment later.<sup>22</sup> Basu and Conning (2013) (applying the logic of Bubb & Kaufman, 2009) show how non-profits, because of the prohibition on their distributing profits to their owners, are better able to commit not to renegotiate. However, the ability of nonprofits to provide this form of commitment still relies on exclusivity of contracts, so is still vulnerable to ex-post competition between lenders, particularly as for-profits have incentives to poach the non-profit’s clients.

The majority of the evidence linking self-control problems to borrowing behavior comes from US credit cards and payday loans. Indirect evidence of the

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<sup>22</sup> See also the later discussion of “Dutch books.”

importance of present biased behavior comes from the contractual forms adopted. DellaVigna and Malmendier (2004) show that credit card contracts do tend to possess the features predicted by their model: low up-front fees and high interest rates. Meier and Sprenger (2010) show that higher levels of (experimentally estimated) present bias are strongly associated with the participant's likelihood and level of credit card debt, arguing that this is evidence of a lack of self-control. Skiba and Tobacman (2008) study payday loan borrowers, showing that the patterns of borrowing and default observed best fit a structurally estimated model of naïve present biased borrowers.

The one paper we are aware of studying non-standard time preferences among microfinance borrowers is Bauer et al. (2012). Following a similar methodology to Meier and Sprenger, they estimate the time preferences of Indian villagers and relate them to their usage of microfinance. They find that strongly present biased individuals are significantly more likely to borrow from a microfinance institution. The authors argue that this is evidence of sophisticated behavior (note the contrast with Meier and Sprenger): the rigid structure and social pressure to repay group loans enables these borrowers to commit to repay their loans, using borrowing to mimic a form of expensive commitment savings product. However, at present the best evidence we have is a correlation consistent with a mechanism.

On savings, we emphasized the concern that naïve savers fail to correctly anticipate their behavior under a commitment savings contract, leading them to sign contracts that they will subsequently violate unexpectedly. Hofmann (2013) finds a fifty five percent default rate on a commitment savings plan that penalized default with a cash fine. In support of the under-commitment hypothesis, eighty percent of clients picked the lowest possible penalty size. She is also able to link default to a measure of naïveté. Similarly sixty six percent of the smokers who took up the CARES account in Giné, Karlan, and Zinman (2010) failed to quit smoking and lost their deposits as a result. Of course we cannot rule out that in both cases decision-makers knew there was a high chance of a shock that would lead to default but felt it was worth trying anyway; however in the Hofmann study most defaulters drop out after making only one deposit, which does not fit a “random shocks” story well.

New evidence suggests that we should be particularly concerned about possible excessive borrowing by the poor. Shah, Mullainathan, and Shafir (2012) and Mullainathan and Shafir (2013) argue that resource scarcity can lead to over-borrowing. In one experiment, participants play a sequence of games where they use finite resources to earn experimental points. In some treatments they are allowed to borrow resources from future rounds of the game to use in the current round. Participants who receive a low endowment of resources are actually made worse off by the availability of credit (they perform worse in every round than resource-poor participants who were not able to borrow), because they borrow heavily from the beginning, depleting their resources in each round. Resource-rich participants do not suffer from access to credit. The authors argue that this is because scarcity leads to “tunneling,” excessive focus on the task at hand, and neglect of other tasks (i.e. future rounds of the game). Scarcity, or poverty, can

thus lead people to make more “present biased” decisions, and in particular be more likely to borrow in a way that makes them worse off.

The evidence discussed above suggests that present bias is important for the behavior of borrowers and firms in credit markets, and therefore that the theoretical concerns about market structure are potentially important. In particular, we should not expect for-profit lenders to cater well to the needs of present biased borrowers, except where those borrowers are sophisticated and the lender is able to restrict later access to credit on the spot market. Credit bureaus might enable firms to provide more effective commitment contracts, but for-profits will still only cater to the borrower’s perception of her future preferences. Non-profits may perform better by credibly committing not to exploit the biases of borrowers, but this still relies on exclusivity of contract.

The limited evidence on levels of sophistication suggests naïveté is widely present, at least in developed country credit markets. Moreover much recent discussion revolves around increasing commercialization, competition and multiple borrowing in microfinance, suggesting that lenders may be failing to offer contracts that effectively commit their borrowers. Recent work on scarcity suggests that the poor may be especially vulnerable. Lastly, if Bauer et al. (2012) are correct, then it may be that rigid microcredit contracts are substituting for commitment savings products that firms are unwilling to provide.

### **3.2 Framing**

Framing effects occur when decision-makers respond differently when the same information is presented in different ways.<sup>23</sup> Typically this relates to a choice of what information to emphasize from a given information set. A classic example from the credit industry is the strong lobbying from credit card companies in favor of retailers offering “cash discounts” instead of “credit card surcharges” (Thaler 1980), presumably because missing out on a discount is perceived as less aversive than paying a surcharge.

We are not aware of any literature exploring the issue of framing in the context of microfinance. Bertrand et al. (2010), study a direct mail marketing experiment by a South African lender. They find that various relatively uninformative changes to marketing content (such as the inclusion of a photograph of an attractive woman on marketing materials) have strong effects on demand even relative to price decreases. While not a framing study as such, this does suggest that the way in which credit offers are presented can be of economic significance.

One feature of microcredit contracts that has not to our knowledge been studied by economists is the way in which interest rates are presented to borrowers. Use of the “flat rate,” which presents the total interest payable as a fraction of the loan principal, is widespread amongst MFIs.<sup>24</sup> In contrast, the “declining balance” or

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<sup>23</sup> For example, the well-known “Asian disease” problem (see e.g. Tversky and Kahneman 1981) where individuals typically respond differently when a hypothetical policy choice after a disease outbreak is framed in terms of how many are “killed” versus how many are “saved”.

<sup>24</sup> See MFTransparency (2011).

APR method takes into account the fact that the outstanding principal decreases as loan repayments are made. APRs are more difficult to understand, so a charitable interpretation is that the use of flat rates is to ease the complexity for borrowers and make comparison easier. However this is only true when comparing loans of the same term length, while APRs are comparable irrespective of the term length.

A less charitable interpretation is that flat rates are used to intentionally mislead the borrower. For a given amount of interest payable, the flat rate is smaller than the equivalent APR. A borrower who is subject to framing effects might perceive the flat rate loan more positively than the APR loan, *even if* she is aware on an intellectual level that they are the same contract.<sup>25</sup> This effect is in addition to any failure to compute the true effective rate and incorporate fixed fees et cetera.<sup>26</sup>

Related evidence (not specifically on flat rates) comes from Stango & Zinman (2009a) who show that (US) borrowers exhibit “exponential growth bias,” essentially the classic problem of under-appreciation of the power of compound interest.<sup>27</sup> This causes borrowers to fail to appreciate how quickly the loan principal is paid off (in a declining balance) sense, and therefore underappreciate the true cost of borrowing. In the data, Stango and Zinman’s measure of individuals’ bias is positively correlated with borrowing (because borrowing appears cheaper than it is) and negatively correlated with saving (because saving appears less lucrative than it is).

Once again markets will tend to fail to de-bias the consumer. The competitive equilibrium will see firms quoting their rates in flat terms because equivalent loans that are quoted in terms of their APRs will not be preferred by biased borrowers. This is problematic from a welfare perspective if the borrower also mistakenly perceives the loan as cheaper than it actually is and borrows excessively as a result.

### 3.3 Unawareness and misinformation

A related issue is that of misinformation and unawareness. Lenders may deliberately misinform borrowers about the terms of the contracts they are signing, or choose not to make borrowers aware of all of the terms (“shrouding” some attributes of the contract).<sup>28</sup> Contracts may be complex, and shopping around may be difficult.

Giné et al. (2012) perform an audit study, sending secret shoppers to obtain information on products from financial institutions in Mexico. They find that they

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<sup>25</sup> A slight modification of the model of Bordalo, Gennaioli, and Shleifer (2012) would imply that a consumer comparing two loans, one priced in flat terms and one in APR terms, would find the APR loan’s price more salient, and therefore more heavily weight that price when evaluating the product.

<sup>26</sup> In practice, many borrowers seem to struggle to understand even how much interest they are paying, see e.g. Tiwari, Khandelwal, and Ramji (2008).

<sup>27</sup> There is a very large related literature, surveyed in the paper.

<sup>28</sup> The classic examples, discussed by Gabaix & Laibson (2006), is of inkjet printers or shaving kits, which are typically sold cheaply but expensive to refill; the refill prices are not made salient when the printer or razor is purchased.

are never recommended the most suitable product for their needs, and are typically provided with incomplete or incorrect information about the products available. A particular focus of the study was on whether firms informed consumers about the “no frills” basic accounts they were legally obliged to offer (they did not) and whether they correctly explained the concept of total annual expense or “GAT” (again, they did not). The authors argue that the results are consistent with strategic behavior on the part of the institutions: misinforming customers earns them higher profits.

A pertinent related example is the common practice of bundling “credit life” insurance with microfinance loans, insurance that pays off the borrower’s debts in the event of her death. Some have raised concerns that this is simply used as a way to increase up-front fees paid by the borrowers. For example, Roodman (2012) writes: “If LAPO were selling the credit life insurance on a break-even basis, the 2 percent fee on LAPO’s eight-month loans would imply a death rate of 4 percent per eight months, or 6 percent per year. That is extremely high in a country with an annual death rate of 1.6 percent—or it is a hidden way to raise the effective interest rate.”

Two related papers by Gabaix and Laibson (2006) and Bubb and Kaufman (2009) deal with a different form of naïveté to that discussed above; some consumers may be unaware of aspects of the contract, leading to inefficient contracting that may not be corrected by market forces. Gabaix and Laibson present a model in which firms sell a cheap product with high but “shrouded” add-on costs. Aware consumers are able to avoid the add-ons, so exploit the pricing strategy, benefiting from the low up-front prices. Unaware consumers get caught unawares and end up paying for the add-ons. Crucially, competition may not give firms an incentive to educate their customers about the add-on strategy. A firm that did so would have to charge high up-front prices because they could no longer cross-subsidize the cheap product with the expensive add-ons (since the newly aware consumers just avoid the add-ons). Thus their newly sophisticated customers would leave to exploit the cheap up-front costs of competitors.

The logic carries over quite naturally to, for example high interest loans, where sophisticates learn to pay off their balance each month, benefiting from the cross-subsidized low fees generated by naïve customers. A very striking related example from a developed country context comes from Gottlieb & Smetters (2012), who document that the typical life insurance policy is priced to be profitable only when a very high proportion of buyers will “lapse” (drop out of or terminate the contract) before the end of its term, and in fact makes substantial losses on consumers that hold their policies to term.<sup>29</sup>

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<sup>29</sup> The authors propose a subtly different theoretical mechanism: narrow framing (sometimes called narrow bracketing). In this theory, buyers correctly anticipate their mortality risk, but underestimate the importance of shocks that will lead them to lapse on the policy. The pricing schedule exacerbates the cross-subsidization from lapsing to non-lapsing buyers by front-loading the premiums to be above actuarially fair early in the term.

Although competition does not fully protect naïve consumers, sometimes non-profits can (see also the discussion of Basu and Conning (2013) above). Bubb and Kaufman point out a key role for the customer-owned mutual or non-profit organizational form. In their model lenders can catch borrowers unaware through hidden fees for missed payments. Since the fees are hidden, the lender cannot easily commit not to charge them should the consumer miss a payment down the line. However, since a non-profit is legally prohibited from distributing profits to its owners, the incentives of the manager to use such fees are dampened, protecting the naïve borrowers. However, this leads them to charge higher up-front fees and, as a result only sophisticated borrowers will buy from them. Bubb and Kaufman (2009) show empirically that people who report being concerned about possible fees and penalties are significantly more likely to hold accounts with a credit union as opposed to a commercial bank which is consistent with their model if we interpret these people as aware of the possibility of facing such fees.

There is evidence, at least from developed countries, that consumers are often not aware, or not focusing on the cost of the financial services they are using. Stango and Zinman (2013a) show that surveying consumers about their overdrafts makes them less likely to incur overdraft fees later on, and that this attention can be accumulated by surveying multiple times. Stango and Zinman (2013b) document substantial dispersion in individual's credit card borrowing costs, controlling for individual credit scores, that is consistent with (lack of) shopping for better deals. (Stango & Zinman 2009b) show that "For those who do pay significant fees and credit card interest, a large share of costs could be avoided relatively easily." The evidence seems consistent with consumers being unaware of how much money they could save, perhaps because firms are deliberately keeping them unaware, and/or because consumers procrastinate due to present bias. The work discussed in Mullainathan and Shafir (2013) is also relevant here.

One can think of reasons why poor borrowers shopping for microfinance loans might also exhibit inertia or insufficient search. For example, the social features of many microfinance products, such as group lending, may make switching providers more difficult.

### **3.4 Microfinance Transparency**

We do not have good data on the types of contracts MFIs are using in general, and in particular on the extent of commitment offered (or lack thereof), or the MFI- or even borrowing group-specific details of exactly what contract terms are disclosed, and in what form. However, it is worth briefly discussing the work of the organization

Microfinance Transparency ([mftransparency.org](http://mftransparency.org)), which was set up to promote transparent pricing and disclosure in the microfinance industry. One of their major contributions is a listing, for several countries, of MFIs and their loan

products along with prices and a price transparency score.<sup>30</sup> The transparency score is computed at the MFI level from the percentage ratio of the MFI's quoted annual nominal interest ratio to their full APR, computed by Microfinance Transparency and including interest, fees, insurance, tax and deposits. We view this measure as closely related to our above discussion of framing and information disclosure. Summary statistics are presented in Table 1.

Country	MFI	Borrowers ('000s)	Portfolio (\$m)	Products	Mean Trans.	Min Trans.	Max Trans.
Cambodia	14	1,462	980	102	91.2	71	98
Ethiopia	17	2,361	360	67	71.7	41	103
Ghana	40	494	148	124	37.3	16	99
India	39	19,436	3,569	94	85.9	74	93
Kenya	15	674	423	83	38.7	12	57
Malawi	9	338	20	28	78.9	41	113
Mozambique	7	39	14	27	69.6	42	102
Philippines	43	1,959	280	125	37.1	12	67
Rwanda	14	139	105	63	48.2	40	71
Tanzania	18	431	239	49	49.7	12	89
Uganda	22	431	312	78	48.5	33	91
Zambia	12	61	15	39	50.8	22	90
	250	27,825	6,467	879	78.0		

Table 1: Microfinance Transparency Data Summary Statistics (our calculations)

The dataset documents considerable cross-country and within-country variation in transparency. The country weighted average transparency score<sup>31</sup> ranges from 37 percent in the Philippines to 91 percent in Cambodia. The lowest score is just 12 percent (MFIs in Kenya, Philippines and Tanzania), i.e. the true APR, taking into account fees, is over eight times the MFI's quoted rate (likely to be quoted as a flat rate).

Microfinance Transparency also provide a detailed breakdown of fees and interest rates by product, the analysis of which are beyond the scope of this review, as well as a country level overview. For example, from the Malawi country profile:

The interest rate calculation method used for microloans in Malawi is predominantly the flat interest rate, observed in 60% of the products analysed. Additional charges in the form of fees and insurance are common, yet disclosure of these charges on repayment schedules are

<sup>30</sup> In particular, transparency scores are available for Cambodia, Ethiopia, Ghana, India, Kenya, Malawi, Mozambique, Philippines, Rwanda, Tanzania, Uganda, and Zambia. Across these countries, 250 institutions are covered, comprising 879 loan products, 28 million borrowers and \$6.5 billion of loan portfolio (our calculations, however it appears that not all portfolio data are taken from the same years).

<sup>31</sup> All averages weighted by number of borrowers, i.e. if a country has one MFI with 100 borrowers and 40 percent transparency, and one with 300 borrowers and 80 percent transparency, its weighted average transparency score would be  $(100*40+300*80)/400 = 70$  percent.

rare – the availability of individual repayment schedules designed for clients is limited, highlighting the difficulty faced by many microloan borrowers in understanding and comparing cost of loans.

On the other hand, for India:

All products score very highly on the Pricing Transparency Index. This is a result of the standard use of the declining balance interest rate and the regulatory restriction on fees.

These quotes highlight many of the issues discussed (although note they are not tied to for-profit or non-profit lending): lack of transparency, hidden fees, framing of interest rates. Taking a view of the set of countries considered, interestingly up-front fees appear to be widely used. However note that the models of present biased borrowers do not predict no up-front fees on credit products, just that lenders will charge relatively lower fees than if they priced refinanced debt at marginal cost.

### **3.5 Summing up**

Since the question of whether markets will exacerbate or correct consumer biases is of fundamental importance to policymakers, it is somewhat disappointing that, to our knowledge, there are no general results on when either of these will take place, perhaps beyond a principle that consumers who are aware of their biases are less vulnerable, as firms have an incentive to offer contracts that mitigate them. As previously discussed, we know from Gottlieb (2008) that provision of commitment in consumption of “investment” and “temptation” goods is differentially affected by competition, with commitment investment goods being more robust to competition. However, as also discussed, savings (which could be thought of as an investment good in this taxonomy) may still be vulnerable to easy credit. Competition may fail to educate consumers about goods or contracts with shrouded attributes (Gabaix and Laibson, 2006), and may underprovide commitment. However, competition does protect consumers against “Dutch books” where the decision-maker is induced into a sequence of trades, think renegotiations of a debt contract, that makes them worse off in every period than had they not traded at all (Laibson and Yariv 2007). Note that this does not mean the consumer gets to consume the optimal commitment contract.

## **4. Conclusion**

The discussion in this review provides an outline of our view of the state of research on the role of for-profits in microfinance. We wish to highlight three key issues.

Firstly, regulators and researchers should not be lulled into a false sense of security by the existing microfinance literature, which tends to emphasize the surplus created by “bankers to the poor.” There is significant scope for market power, the effects of which have only just begun to be explored.

Secondly, there has been almost no research in microfinance on the specific organizational issues typically associated with the literature on non-profits, an area

we feel is ripe for future research and of key interest to regulators in this sphere. This is especially important as our perception is of a general trend to commercialization; for instance some Indian MFIs are converting from NGOs to private commercial entities. We have provided some thoughts and conjectures on these issues, motivated by existing work, but much more is needed.

Thirdly, regulators need to be attentive to cases where markets will not optimally serve behaviorally biased borrowers, potentially even exacerbating their biases. The extent to which contracts can help present biased borrowers commit themselves not to borrow too much in future; the extent to which contracts are framed in ways that lead borrowers to misperceive their costs; and the extent to which lenders deliberately mis- or under-inform their customers, having no incentive to do otherwise, are areas that regulators should be particularly attentive to. Again, evidence of the importance of these behavioral issues primarily comes from developed country contexts, such as credit card and payday lending. There is great scope for careful theoretical and empirical work that brings the insights of behavioral economics to bear on the borrowing and saving behavior of millions of poor people around the world.

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