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The Unbanked: Evidence from Indonesia

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The Unbanked:

Evidence from Indonesia

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Abstract

Why do so many poor households lack access to finance? Are the unbanked creditworthy? Largely not interested in borrowing? The answers are at the heart of ongoing debates around the deepening of financial systems. We examine household-level data from 1438 households in six provinces in Indonesia. All households, whether or not they were presently borrowing, were assessed by bank professionals to judge creditworthiness. About 40 percent of poor households were judged creditworthy, but only 14 percent had recently borrowed. Possessing collateral was a minor determinant of creditworthiness. Despite depictions of widespread pent-up demand for loans, about half of creditworthy poor households report being averse to taking on debt. Loans for small business were desired, but respondents often highlight broader household needs, including paying for school fees, medical treatment, and home repair.

1. Introduction

The rhetoric around microfinance creates a compelling picture: hundreds of millions of poor and very poor households seek capital to build small businesses, but their lack of collateral restricts access to loans. Innovative "microbanks" meet the demand with more flexible collateral requirements and thus unleash untapped productive power. The narrative has driven the global expansion of microfinance and was highlighted by the Nobel Peace Prize committee in awarding the 2006 prize to Muhammad Yunus and the Grameen Bank of Bangladesh.

The notion of millions of unbanked households accords with evidence on the shallow outreach to the poor of most formal-sector banks (Armendáriz and Morduch, 2005). But it is hard to tell who among the unbanked are (i) excluded despite having worthy uses for capital, (ii) not creditworthy, or (iii) creditworthy but not interested in taking on debt. The proportions matter. Yunus's activist vision stresses option (i), suggesting that the unbanked are largely thwarted entrepreneurs. Those who argue that there is no need for special banks for the poor stress options (ii) and (iii), arguing that net impacts of microfinance are apt to be smaller than advocates assert. Typical household-level data sets, though, don't permit estimation of the relative magnitudes of the three categories. Gauging creditworthiness, for example, typically requires an on-site professional assessment of unbanked households. Debates thus persist without progress.

We examine data from Indonesia, an important early site for microfinance (e.g., Patten and Rosengard, 1991). The survey covers 1438 Indonesian households in six provinces in Fall 2002. The survey enumerators were loan officers and other professionals employed by Bank Rakyat Indonesia (BRI), a state-owned bank run on commercial principles with wide reach in

rural areas (see, e.g., Yaron et al, 1998). The sample was drawn, though, without reference to BRI's customer base. All households in the survey, whether or not they were borrowing, were scored according to their feasibility for taking BRI loans. The data thus offer the unique chance to assess the creditworthiness of slices of the general population using procedures applied by a broad-based, well-respected bank. The results show that although less than 10 percent of the poor population is found to have borrowed recently from a formal sector bank (BRI or another), nearly 40 percent are determined to be creditworthy according to BRI's standards.

BRI's lending methods and loan products compel interest since they have proven to be deliverable profitably and on a wide scale to low-income populations throughout Indonesia. Households that are not deemed creditworthy by BRI's standards may prove to be good customers of banks and other lending institutions (cooperatives and nongovernmental organizations, for example) using alternative methods. Doing so reliably remains a challenge, and one of our most striking findings is the large un-served poor population deemed creditworthy using BRI's relatively conservative criteria.

BRI requires that borrowers pledge collateral, and the lack of legal title to assets may help explain why the other 60 percent of poor households were deemed infeasible for BRI loans. The lack of collateral was cited as a deterrent by only about 10 percent of the households that are creditworthy but not borrowing from banks, however, and the professional assessments of the enumerators concur. BRI's insight, as with most microlenders, has been to find better ways to lend against household income, not against assets. Collateral thus plays a limited role in determining creditworthiness relative to traditional banking approaches.[1]

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[1] This finding is echoed in a recent World Bank study, the Rural Investment Climate Assessment for Indonesia (World Bank 2006), available at www.worldbank.org/id/rica. In a sample of five *kabupaten*, the report finds that

So how to explain the gap between the 40 percent of poor households that are deemed creditworthy and the 10 percent that borrow from formal sources? One explanation is debt aversion: about half of poor households that are creditworthy are averse to taking debt and do not seek credit; the incidence of debt aversion poses a further challenge to the notion that microcredit alone is a leading solution to poverty. In this case, the limit to credit is not only given by the lack of creditworthiness among parts of the poor population; the limit is also given by the fact that some creditworthy households don't seek loans. Many households save but do not borrow (BRI has a 10 to 1 ratio of customers who save versus those who also borrow). Among those households that only save, most are in fact creditworthy. Part of this gap may be narrowed through information and marketing drives, given that households may be unaware that they qualify for credit. (But we do not expect banks to take much effort to tell them: poor customers, especially those who seek small loans with limited profit potential for banks, are relatively low priorities for commercial microfinance banks in Indonesia.) The point remains that we do not see wide-scale pent-up demand, and we do not expect that to change given the current institutions and incentives. But given the importance of debt aversion, it deserves further attention.

The story that emerges differs in other important ways from the narrative that dominates microcredit rhetoric. Most important, financing small businesses is the most common use of loan funds, but low-income households in the survey on average use loans for household needs about one third of the time. Important non-business uses include paying for school fees, medical treatment, home repair or expansion, meeting daily consumption needs, and meeting social and holiday expenses. The finding holds for low-income households across a wide range:

10-20% of households may have collateral problems but that the lack of collateral does not stand out among the

households below regional poverty lines, just above the lines, and well above the lines.[2] Despite the emphasis on "microcredit for micro-enterprise" by donors, consumption credit appears as an important need, not as a minor concern.

2. The Indonesia Microfinance Access and Services Survey 2002 (MASS 2002)

The survey was completed in 2002 after the Indonesian economy had stabilized following the financial crisis of 1997-98. The Rupiah/US dollar exchange rate had risen from 2383 at the end of 1996 to over 10,000 during 1998. Inflation also jumped up: the consumer price index increased from 115 in 1997 to 182 in 1998. Inflation between 1999 and 2000 was about 10%, however, and the Rupiah has further depreciated, but not precipitously.

While the immediate circumstance surrounding the fall of President Suharto created uncertainties, the transitions to Presidents Habibie and Wahid were mainly peaceful (outside of the several regions with secessionist movements). Thus, the end of 2000 had seen a year of relative calm for most citizens, and the survey respondents were again focusing on longer-term plans and investments. By 2002, the financial crisis was safely over, though the political scene remained charged.[3]

The survey was undertaken by BRI as a way to map the financial landscape and gauge potential markets. BRI collected the survey in the second half of July and the first half of August 2002, and it covers 1438 respondents in six provinces: West Java, East Java, West Kalimantan, East Kalimantan, North Sulawesi, and Papua. The provinces included 20.6 million households

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many reasons entrepreneurs cite for not borrowing.
[2] The findings complement small-scale survey evidence on 53 households in three sample branches of Grameen Bank that show Grameen Bank loans, although nominally made for business purposes, often being re-directed toward non-business ends (Rutherford, 2006).
[3] See Patten, Rosengard, and Johnston (2001) and Robinson (2002).

and 85 million people. The Rupiah-US Dollar exchange rate was roughly 9000 Rupiah per

dollar on August 1, 2002.[4]

Two *kabupatens* (or *kotamadyas*) were selected in each, and from each

kabupaten/kotamadya (rural regencies/urban municipalities), three *kecamatan* (sub-districts)

were selected at random.[5] Likewise from each of these *kecamatan*, two *kelurahan*/*desa* were

selected at random. Finally, respondents were chosen at random from local censuses. There was

no attempt to over-sample bank customers, and the survey includes both customers and non-

customers. The final survey covers roughly 20 households in each of 72 villages or urban

neighborhoods. The results presented below are weighted (and standard errors are corrected) to

reflect the stratification by province and district.

The main enumerators were BRI loan officers, with quality checks and supervision by

Jakarta-based BRI staff. Loan officers were not permitted to collect data in the regions in which

they worked to rule out biases due to collecting information on their own customers or potential

customers. The survey gives direct evidence on the living standards of households: the survey

includes direct information on wages and on enterprise revenues (but only allows a partial

reckoning of the cost of family labor and the imputed cost of flows of services and depreciation

of assets). The data are used to generate a measure of per capita income for each household, and

that figure is compared to regional poverty lines.

The poverty rate for survey households is slightly higher than the official statistics for the

country as a whole. For rural areas, the sample poverty rate is 26.3% versus 21.1% in the official

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[4] Exchange rate is from Bank Indonesia. On August 1, 2002, the official sell rate was 9,564 Rp./$; the buy rate was
8564 Rp./$. Historical exchange rates are available at www.bi.go.id/bank_indonesia_english/monetary/exchange/.
[5] The *Kabupaten/Kotamadya* selected for this survey were: West Java: Kabupaten Purwakarta and Kabupaten
Bandung; East Java: Kotamadya Madiun and Kabupaten Malang; West Kalimantan: Kotamadya Pontianak and
Kabupaten Sanggau; East Kalimantan: Kabupaten Kutai and Kotamadya Samarinda; North Sulawesi: Kotamadya
Manado and Kabupaten Minahasa; and Papua (Irian Jaya): Kotamadya Jayaura and Kabupaten Manokwari.

statistics. In urban areas, the comparison is 18.3% versus 14.5%. There is considerable debate

about setting poverty lines in Indonesia, and we use the official measures as a benchmark.

Assuming a 30-day month and converting at official exchange rates, the national-level poverty

lines are 36 cents per person per day in rural areas, and 48 cents per person per day in urban

areas (purchasing power-corrected lines are substantially higher).[6] Household incomes below

are normalized as multiples of regional poverty lines, with most income data falling between half

of the local poverty line and 5 times the line.

3. Poverty, credit access and demand

Table 1 shows that, not surprisingly, the probability of borrowing recently rises steadily with

household income from 14 percent for poor households to 31 percent for non-poor households

with per capita income up to three times the poverty line. Over half of better-off households

borrow. The rising probability of borrowing as income rises is consistent with increasing access

to finance (a greater chance of being judged creditworthy coupled with greater proximity to

banks) and stronger demand for loans among higher income groups.[7]

The lower panel of Table 1 shows where borrowers borrow. Among poor borrowers, 57

percent have taken loans from either a BRI unit (46 percent) or another formal bank (11 percent),

and roughly half have borrowed from a "micro" bank (26 percent) or an informal provider (25

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[6]Province-level data are calculated by Statistics Indonesia (Budan Pusat Statistik) drawing on the 2002 SUSENAS Survey. There was no price survey for 2002 in Papua, so the poverty line here is the 2001 line increased by the average urban (+30%) and rural (+20%) increases between 2001 and 2002 for all Indonesia. Province-level data are calculated by Statistics Indonesia (Budan Pusat Statistik) drawing on the 2002 SUSENAS Survey. There was no price survey for 2002 in Papua, so the poverty line here is the 2001 line increased by the average urban (+30%) and rural (+20%) increases between 2001 and 2002 for all Indonesia.

[7] The pattern is also consistent with the under-counting of informal-sector borrowing, which would push numbers down for the poor especially. Our focus below, for the most part, will be on borrowing from the formal sector.

percent).[8] "Micro" banks are defined to include credit unions and cooperatives and other

banking institutions that are neither fully commercial nor "informal". Informal providers include

moneylenders, local credit and savings clubs, neighbors, and relatives. The row on BRI pertains,

here and below, to its "unit" program, the nationwide branch system that focuses on

microfinance for low-income households. The "other formal bank" category includes borrowing

from other (non-"unit") parts of BRI, as well as borrowing from BRI's competitors.

While the formal banks have good penetration among poor households who borrow, most

of their business lies elsewhere. By multiplying the incidence of borrowing in the top panel and

the distribution across sources in the bottom panel, we find "microfinance institutions" and the

informal sector serve a wide swath of the population, though they tilt toward the low end of the

income distribution. While 10 percent of BRI unit borrowers are poor in this sample, their

customers tilt away from the low end.[9] But because BRI is large, it serves nearly as many poor

customers as do the "pro-poor" microfinance banks and the informal lenders combined. In

reaching large numbers of poor households, scale matters as much as an institution's relative

orientation toward the poor.

Creditworthiness

BRI was motivated to collect the survey in part to identify untapped markets. To that end, the

survey took advantage of the fact that most enumerators were credit officers (*mantri*)

participating in a different region than their usual place of employment. At the end of the

survey, the enumerators were asked to use their professional judgment to evaluate the given

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[8] Table 1 gives definitions of the bank sources.

household. The evaluation was not shared with the household. The specific question focused on the household's potential credit-worthiness with respect to borrowing from BRI—with BRI's existing line of loan products and processes. The enumerators were also asked about the amount of credit and the term of credit worth giving, as well as reasons that the household was not worthy to receive credit.

The hypothetical loans (which are characterized explicitly as part of the bank's "KUPEDES" micro loan product) are offered at commercially-viable fees. At the time of the survey, the annual effective interest rate on BRI loans was about 40 percent (2.5 percent per month). In practice, though, roughly 90 percent of borrowers get part of their interest costs back in the form of a rebate. If borrowers make all of their payments within a six-month period in a timely manner, they get back 0.5 percent per month, making the net annual effective interest rate about 32 percent. Otherwise, the 0.5 percent is kept by the bank as a penalty. While BRI requires collateral, the bank seldom takes legal action to take possession (except in cases of suspected fraud). Loan officers are fairly flexible in what they will accept as collateral, but they typically choose property or vehicles. They are also flexible about required ownership documents; often a tax receipt can substitute for formal title. Previous BRI surveys show that about 90 percent of Indonesian households have assets that would qualify as collateral, and the requirement is not viewed by the bank as a major block to depth of outreach.[10]

The first row of Table 2 gives the data on creditworthiness with regard to the hypothetical loans. Many more households were deemed creditworthy than are actually borrowing from formal lenders: enumerators deemed that 38 percent of households on the bottom end were

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[9] The survey found that 6 percent of the poor households in the sample had taken loans from BRI. The percentage grows to 18 percent for the sample above the poverty line but with less than three times the poverty threshold. In the top income category, 39 percent are BRI borrowers.

potentially feasible borrowers from BRI, 65 percent in the middle group, and 83 percent at the top.

The enumerators identified creditworthy households far down the income ladder, and the results suggest the difficulty in making blanket statements about the poor and their opportunities. Muhammad Yunus has argued that credit is a "human right" even for the poorest, suggesting an imperative to make lending universal. Others, like Robinson (2001, p. 21), have argued that the very poor are likely to be ill-suited for commercial borrowing, a result echoed in the determination by enumerators here that 62 percent of the poor households in the sample would not be good prospects for borrowing. On the other hand, Table 2 shows that the enumerators identified 38 percent of poor households that would be viable borrowers—given BRI's *existing* loan products and processes. Even at levels of per capita income under half the official poverty line, enumerators identified 36 percent of households as creditworthy. The evidence illustrates the limited value of broad-brush statements about banking the poorest.

The larger question is not whether a substantial group of borrowers (well) below poverty lines is potentially creditworthy—the evidence suggests it is. The question is instead a supply-side question: can they be served within the constraints of an institution's business/social model. The enumerators spent as much as an hour and a half with the customers in their homes before making their judgments, time that would not normally be possible. They assessed the households on the basis of the ability to repay loans on time, not on whether the loan would be particularly profitable. All else the same, making small loans is less profitable than making larger loans when fixed costs per loan are large. The results should thus be tempered by the fact that although the households may be creditworthy (in the sense of being able to repay a loan at the

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[10] *Introduction to BRI's Unit Banking System,* P. 7. Jakarta: BRI.

given interest rate), lending to them with given products and prices may be neither efficient nor profitable for the bank. We return to this issue below.

Collateral

Table 2 also provides evidence on assets, collateral, and the enumerators' reasons for deeming households not creditworthy. Hernando De Soto (2000) argues strongly that the lack of legal title to assets holds back the progress of the poor. His argument hinges on the ability of title to transform assets into collateral and thus to secure capital, ultimately generating income for the poor. Without title, De Soto argues, the capital is "dead": unhelpful in generating the leverage needed to climb from poverty.[11]

Row 2 of Table 2 shows that the average asset holdings (and possession of title or other ownership documents) is not dramatically different for households below the poverty line and those households one rung up the income distribution. While households on the rung just above the poverty line have more assets, they are not much more likely to have better documentation.

The enumerators were asked why they rejected the given households, and the bottom panel of Table 2 shows that 81 percent of the time, the reason given with regard to poor households centered on deficiencies in the household's income or business rather than on the ability to pledge assets as security. Less than 2 percent of the time was a lack of collateral highlighted. The result highlights the success of BRI's lending method, which is based in large part on lending against expected household income flows (and the bank's confidence in being able to time loan repayment installments to capture cash flows before they are diverted). The approach departs from the traditional banking method of lending primarily against assets. By

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[11] See Woodruff (2001) for a critical review of De Soto's *Mystery of Capital*.

focusing on deficiencies of the traditional banking mode, De Soto is too pessimistic about prospects for spreading banking to a large share of the poor.

In a different way, he is also too optimistic. If the problem of lack of creditworthiness for the 62 percent of "rejected" poor households is a deficiency in income or business performance, the problem will be far harder to overcome than implementing a titling program.

Returns on Assets

The data allow another view on creditworthiness and the finding that difficulties in credit access spring from income deficiencies not from lack of collateral. Here, we turn to measures of returns on assets of household enterprises. Most enterprise-related borrowing is for working capital to keep an enterprise running (i.e., working capital before liabilities are netted out).[12] One simple measure of the creditworthiness of an enterprise is thus the ratio of profit to working capital. The assumption underlying the measure is that fixed assets are paid for and that profits accrue to current assets. We instead look at the return to total assets, a measure that assumes that borrowers also seek to purchase fixed assets (where we exclude "household" assets like the home or house-plot, even if partly used for running the enterprise). This is the "unadjusted" measure of returns on assets shown in Table 3. It is calculated as net profit (before interest charges and capital-related fees are subtracted) divided by total assets. The measure just reflects cash flows. Compensation for workers who do not earn cash or in-kind wages is left out of the profit calculation. The lack of adjustment for the opportunity cost of owner-supplied labor (which is the biggest omission relative to economic measures of profit) over-states returns on assets particularly for poorer households, for whom unpaid family labor is critical. The measure thus

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reflects the "ability to pay" for loans in the narrow sense of asking whether enterprises generate enough revenue to service debt at given interest rates. This is ultimately the question of concern to loan officers--whose first interest is in getting loans repaid, not in ensuring that the household necessarily gets the best possible deal.[13] A value of 0.10 suggests that, leaving aside the household's cost of living, it could repay a loan equivalent to the full value of enterprise assets with an interest rate of 10% per month -- if it was willing to fully liquidate its inventory in order to repay the principal.[14]

The data show that the return on assets measure rises with income. Poor households have lower returns, by this measure, than better-off households. Adjusting for the opportunity cost of unpaid labor would likely sharpen the positive correlation.[15] The average monthly return for poor households, 13 percent, is ample to cover BRI loans priced at 2.5 percent per month in effective terms.[16] The average monthly return for poor households judged to be creditworthy is identical to the overall average for poor households (again, 13 percent), suggesting implicitly that *lack* of creditworthiness is not simply a function of low returns on assets.

To go further, we turn to the stability of the returns. There are two independent concerns: First, how affected is the enterprise by seasonal fluctuations? Second, how great is the inherent

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[12] We are using "working capital" in an economist's sense of the term. The corresponding accounting term is "current assets."

[13] But note that in order to calculate ability to pay, loan officers will typically deduct a standard allowance for household cost of living.

[14] More realistically, the same household would be more than able to repay a 2-year KUPEDES loan for the same amount (with monthly payments of 6.17% of the loan principal) without needing to draw down the enterprise assets – and would still have a bit left over to live on. In practice, most lenders would limit credit to a much smaller percentage of enterprise assets, almost never going above two thirds of such assets.

[15] This result appears to contrast with the result of McKenzie and Woodruff (2006) who find that returns to assets fall with the level of assets in a Mexican survey. Here, though, we're mapping returns into income rather than assets, and that may explain the difference. Note too that if higher-return households have higher opportunity costs for labor, adjusting for the opportunity cost of labor use might flatten rather than sharpen the comparison.

[16] Following through on the example in footnote 14, the average household could borrow on a 2-year term and repay the loan using only half its enterprise income without drawing down enterprise assets. Repaying in one year would be somewhat more difficult, with monthly payments reaching 10.3% of the loan principal.

risk of the enterprise? We find greater stability as the households become better off.

Enumerators gathered information on activity levels of enterprises over the year. The average

number of "quiet" months for the businesses of poor households was 7.7, relative to 4.4 months

for the best off households. Given the rigid loan repayment schedules favored by formal sector

banks like BRI, seasonal ups and downs are considered a major constraint in lending. On the

other hand, the fraction of businesses deemed being "very high risk" on a self-determined 4-

point scale was somewhat lower for the businesses of poor households (4.2 percent) than that of

better-off households (7.8 percent), but not significantly so. The businesses of the poor

households in the sample, in sum, appear to be relatively low risk but highly seasonal, and this

emerges as an important potential concern in limiting the spread of access to banking.[17]

Desired loan sizes

An additional potential deterrent is given by small-sized loans. BRI estimates the minimal loan

size that allows the bank to break even on a loan transaction (Bank Rakyat Indonesia and

Harvard Center for Business and Government, 2003). The calculation takes into account

expected interest payments adjusted for non-payment and the costs of lending (including staff

salaries, training, and supervision). In December 2002, the break-even loan size was determined

to be Rp. 1.9 million (about $210).[18]

      Table 4 gives responses to a question on desired loan sizes – "If this household can

borrow the desired amount of money from a formal financial institution, what would be deemed

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[17] Seasonal ups and downs form a constraint on lending via their disruption of cash flow. If cash inflow is zero or below the level the loan officer expects to be used for family needs, the loan officer usually won't lend for those months. The loan officer would be more willing to make short-term loans to cover busy times with above-average cash inflows.

the most appropriate use for said loan? What is the desired loan amount?" For households under

the poverty line, 58 percent or respondents desired a loan under the BRI break-even size (relative

to 27 percent in the middle income group and just 15 percent among the better-off households).

A clear distinction can be seen among households judged creditworthy and those judged not to

be. Here, 42 percent of creditworthy households seek loans under the break-even line, while

two-thirds of the not creditworthy households do. The pattern is even sharper for the higher

income groups.

4. Saving and debt aversion

With savings, households can build up assets to use as collateral, smooth seasonal consumption

needs, self-insure against major shocks, and self-finance investments. Figure 1 shows the rapid

growth of savings accounts at Bank Rakyat Indonesia. By the end of 2005, BRI served 3.3

million low-income borrowers and over 32.3 million low-income savers.[19] Given the mountain

of success stories of borrowers who have grown their businesses through micro-loans, it is

tempting to assume that the 29 million households that opt not to borrow are not creditworthy.

Marguerite Robinson (2001, p. 22) describes a process of graduation to borrowing that makes the

view plausible:

> Some households start extremely poor and gain employment. They may then
> open small savings accounts. Some households with savings accounts then add
> small loans…Some clients are able to expand and diversify their enterprises and
> to qualify for larger loans.

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[18] This calculation gives the size needed relative to covering total costs. If the bank only aims to cover the marginal cost of additional lending, the 12/02 figure s Rp. 1.3 million (about $145).
[19] Data for 2005 are from the BRI International Visitor's Program, http://www.ivpbri.com/profile.php.

The depiction might suggest that the households that are saving at institutions like BRI are not borrowing because they are not yet in a position to do so.[20] It further suggests that those who save but do not borrow are likely to be poorer than those who borrow, and that it is on the saving side that BRI achieves its greatest social outreach.

Some of this is true. BRI serves more poor savers than poor borrowers, as the non-parametric densities in Figure 2 suggest. But Figure 3 shows that there are more creditworthy households than current savers, so that outreach via borrowing remains a potential frontier. The top row of Table 5 shows that the probability of having a savings account rises with income: The bottom panel of Table 5 shows that the fraction of households that save but do not borrow falls with income.[21]

The bottom panel of Table 5 shows that among the households that save but that do not borrow, most are in fact creditworthy and most are not poor. Why then don't they borrow? Among poor households, one quarter of savers (about half of the creditworthy non-borrowing savers) are creditworthy but report that they do not borrow because they are averse to debt. For the best-off income group, over half of savers who do not borrow are creditworthy but debt averse. The prevalence of debt aversion challenges the view that microcredit is the sword that will free all poor households from poverty. Understanding the reasons behind debt aversion will be crucial to next steps in expanding the role of microcredit or appreciating its limits..

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[20] This view is not being ascribed to Robinson. Robinson (2001 and 2002) provide richly descriptive sources on microfinance in Indonesia.
[21] Comparing Table 2 with Table 5 also indicates that having a savings account is in itself not a very useful indicator of creditworthiness; there is no statistically significant difference between creditworthiness of savers and that of the income group as a whole.

5. Beyond microcredit for micro-enterprise

A further challenge to conventional wisdom on microcredit emerges from data on loan use. The idea of microcredit has been closely bound with the desire to promote micro-enterprises, the small businesses of low-income households. Many of the businesses are so small that they employ no one but the proprietor. Muhammad Yunus's vision in building Grameen Bank was to reduce poverty by helping borrowers expand their small enterprises. Marguerite Robinson (2001, ch. 3), while disagreeing with Yunus at key points, also maintains the sharp focus on lending for micro-enterprise. She offers a stream of anecdotes that stress the way that credit helps small businesses grow, taking examples from countries that include the Philippines, Indonesia, Senegal, Nicaragua, Kenya, Argentina, and the Kyrgyz Republic (e.g., pp. 107-120). By helping to build micro-enterprise, it is hoped, microcredit can expand production and generate income for borrowers.

Table 6 affirms the importance of small business loans, but it also shows that half of the poor borrowers in the survey are taking loans for purposes unrelated to business. The data give the stated use of the last loan taken from each source; since some households borrow from more than one source, the percentages sum to over 100 percent. For borrowers above the poverty line, the percentage borrowing for business rises to 55-47 percent—i.e., 35-45 percent of households are borrowing for household uses. Purposes include home improvement, non-business land or building purchase, school tuition, medical treatment, loan repayment, meeting daily needs or retirement needs, vehicle purchase, buying household goods, ceremony or social expenditure, holiday needs, or jewelry purchase.

Part of the explanation rests with the fact that only about 70 percent of households operate a family enterprise. The bottom panel of Table 6 shows, not surprisingly, that borrowing for business is more likely if a household has a business. But even then, roughly one quarter of households are still borrowing for household purposes.

Since only about one third of the sample borrows (and only 14 percent of poor households borrow), cell sizes are small; the total sample of borrowers is just 549. Cell sizes are even smaller in Table 7, where the uses of loans is disaggregated by the source of the loans. With due caveats, the table shows roughly the same patterns as Table 6 for borrowers from Bank Rakyat Indonesia and other formal banks: just 57 to 62 percent of borrowers take loans for business purposes.

The bottom panel shows that most loans from "micro" banks and the informal sector are not taken for businesses (the notes to Table 1 give definitions of institutional categories). For poor households, 55 percent of loans are for household uses and one third are for business. This final piece of evidence makes plain the empirical leap embodied in a line commonly heard in defense of the relatively high rates of interest charged by commercially-driven microfinance institutions ostensibly lending for business investments. Helms and Reille (2004), for example, compare interest rates charged by microlenders to rates charged in "informal credit markets (such as local moneylenders), which are even more expensive." Table 7, though, shows that loans from informal credit markets are used for broadly different purposes than loans from banks like BRI. A larger data set is needed to address the comparison with confidence, but the data in

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Table 7 suggest that BRI loans and moneylender loans are not obvious substitutes in terms of their typical uses.[22]

A final piece of evidence comes from households that are not currently borrowing from "formal" banks (including the BRI units). Households were asked their favored uses for loans, were they to borrow from a formal bank. Table 9, with a sample size of 1028, yields results on prospective loans that parallel the results on actual loans in Tables 6 and 7. Again, most loans are to be used in support of business, but a large share (31 to 44 percent) of loans are marked for non-business purposes.

6. Conclusion

The Indonesian microfinance experience is often held up as an alternative model to that of Grameen Bank of Bangladesh (e.g., Robinson, 2001). The experience of Bank Rakyat Indonesia (BRI), a publicly-owned commercial bank with a large microloan portfolio, has held an especially important place in assessing and rethinking experiences to date with microfinance. The present paper uses household survey data from six provinces, completed in late 2002, to revisit claims made largely on the basis of administrative data and anecdotal evidence. The survey was unique in using professional credit officers to collect data and judge the creditworthiness of households. The feature allows us distinguish between demand-side and supply-side explanations for patterns of financial use.

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[22] Another way to interpret the finding is that KUPEDES loans are cheap enough (and for sufficiently long terms) to use for business purposes, while the more expensive credit has to be reserved for relatively urgent "distress" situations.The comparison here is made somewhat less sharp by the aggregation of informal lender with "micro" bank loans and the aggregation of BRI "unit" loans with those from other formal sector banks. Aggregation is necessary due to small cell sizes, but analysis of the underlying shows similar basic patterns within categories, suggesting that little information is lost in aggregating.

The "unbanked" are a broad and differentiated population, though often lumped together in policy analyses. Differentiating between households facing credit rationing and households not creditworthy or averse to debt is a critical first step in locating the frontiers of financial access. One of the most important findings here is that a substantial group among the poor of Indonesia—roughly 40 percent--are creditworthy using the lending criteria of BRI, the country's leading "commercial" microfinance bank. The survey reveals that fewer than 10 percent of poor households had recently borrowed from a formal bank, suggesting that the banking sector is far from exhausting the present market. Over half of poor savers have not borrowed recently, and about half of those households are in fact creditworthy. And half of this latter group (households who save only but who are creditworthy), when pressed for why they opt not to borrow, respond that they are fundamentally averse to taking on debt. The prominence of debt aversion tempers assertions by microcredit advocates who depict widespread, pent-up demand for loans. Such demand may eventually be forthcoming in full, but, despite the inroads made by specialized microfinance banks like BRI offering reliable and well-priced products, constraints loom for many poor households. Social and psychological barriers may play a large role, but debt aversion remains poorly understood. We cannot assume that debt aversion is permanent, and one can plausibly imagine debt aversion being linked to a lack of economic opportunity, a deeper knowledge of enterprise risk level and the personal consequences of default, lack of information about credit products and bank procedures, all of which could change over the years.

One consistent finding is the priority placed on loans for consumption purposes. While borrowing for business is the most common purpose for loans from formal sector banks, loans for "household" purposes dominate loans from the informal sector and from cooperatives and other non-bank financial institutions. Even for loans from the formal sector, roughly a quarter of

loans were for household purposes. While microcredit advocates focus sharply on loans for

business in promoting microcredit, microcredit customers look to the financial system to meet a

much broader range of needs. The results highlight ways that survey data can reveal underlying

needs, constraints, and opportunities of unbanked households—and can refine and challenge the

assumptions that define policy debates and business strategies.

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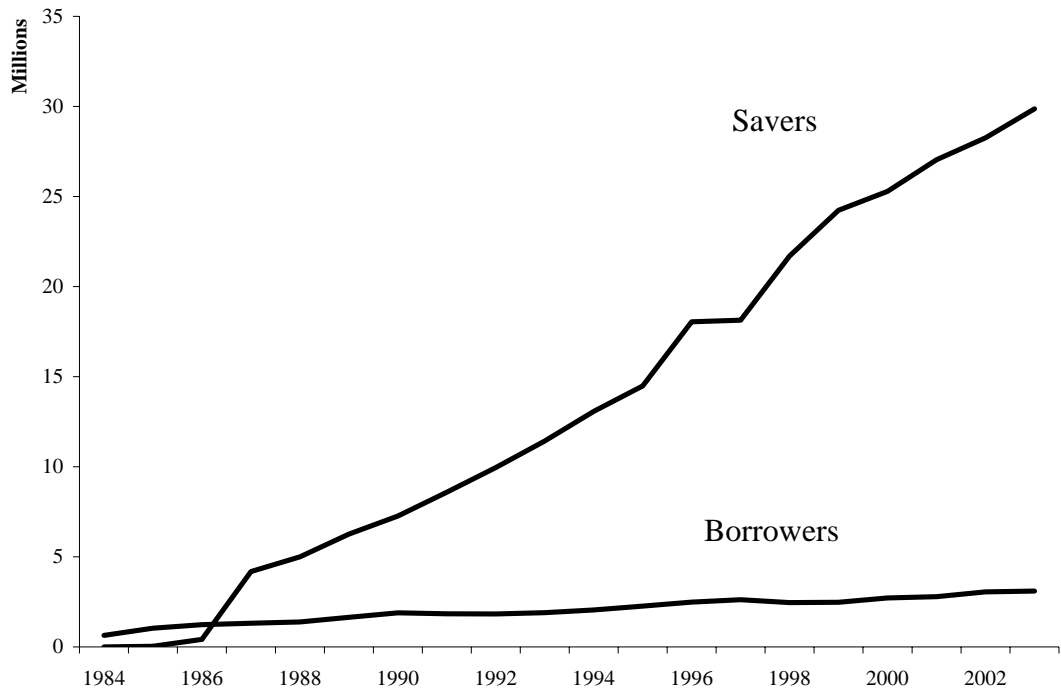
Figure 1: Bank Rakyat Indonesia. Numbers of borrowers and depositors, 1984 – 2003.

Figure 2: Density of log income for BRI unit borrowers, BRI savers only and BRI non-customers. The x-axis gives household income per capita as a multiple of regional poverty lines.

Fraction of
population

Creditworthy

Saver

Borrower

Income per capita as fraction of regional poverty line

Figure 3: Likelihood of being judged creditworthy, being a borrower, and using a savings account or device

Table 1:

The distribution of borrowers within income groups

(percent)

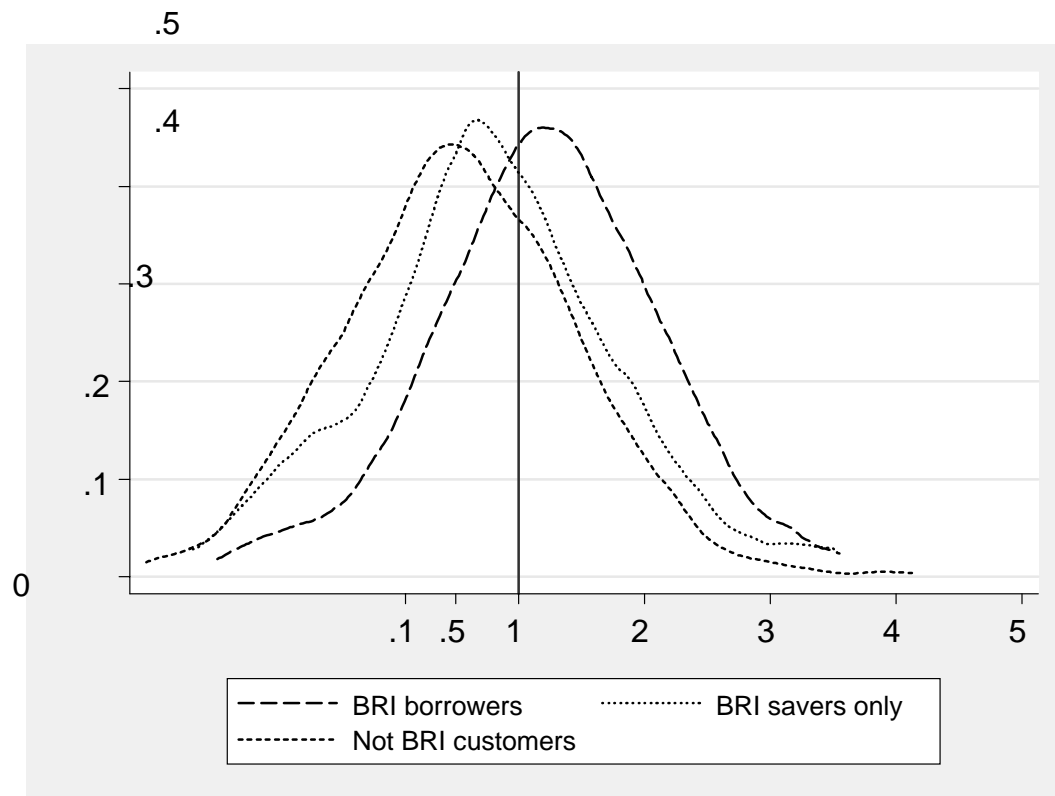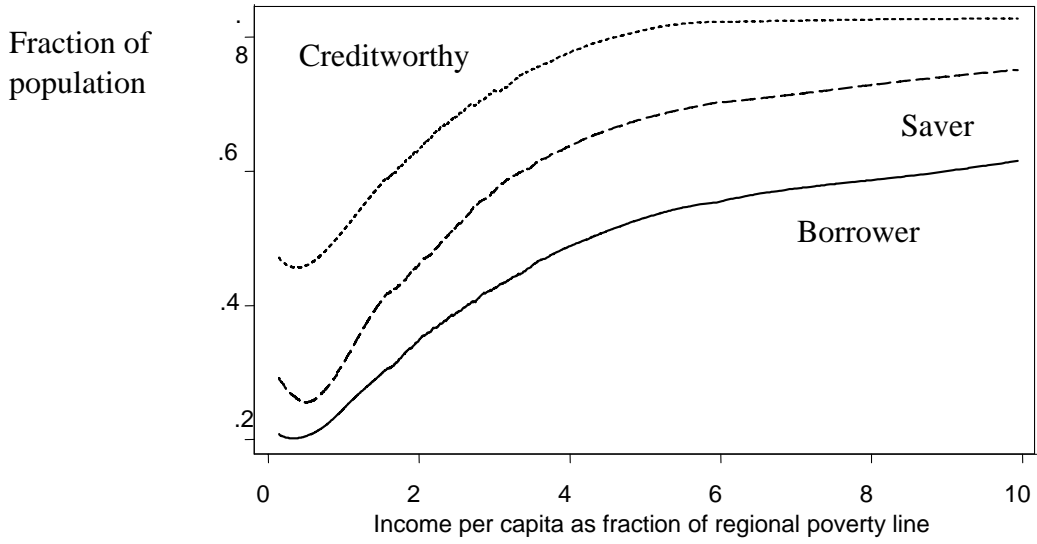|	Below poverty line		Per capita income is 1 to 3 times the poverty line		Per capita income is more than 3 times the poverty line		All	
Borrower?	14	(2)	31	(5)	57	(5)	32	(4)
Observations	330		617		485		1432	
Among borrowers:								
Bank Rakyat Indonesia	46	(8)	60	(6)	68	(7)	62	(5)
Other formal banks	11	(6)	14	(3)	33	(7)	22	(3)
"Micro" banks	26	(6)	20	(5)	8	(3)	15	(3)
Informal finance	25	(8)	15	(7)	9	(6)	14	(5)
Sum	*108*		*109*		*118*		*113*	

Notes: "Borrower" indicated that a household member has borrowed recently from a source, formal or informal. "BRI Unit Borrowers" have taken loans from the microfinance arm of Bank Rakyat Indonesia. "Other bank borrowers" have taken loans from other "formal" sources including the BRI branch offices, Bank Central Asia (BCA), Bank BNI, a local development bank, Bank Danamon, Bank Mandiri, Bank Bukopin, a Sharia commercial bank, other private commercial bank, Bank Perkreditan Rakyat (BPR), or a Sharia rural bank. "Micro" bank borrowers have borrowed from a rural credit agency (BKD/TPSP/LDKP), credit union/cooperative, rural unit cooperative (KUD), BMT/BMM Islamic institution, "market bank," local financing institution, or government bureau. "Informal" sources include Pawnshop service, joint venture, a self-managed institution, professional moneylender, family/relative/friends, or other informal source. The sum in the bottom row exceeds 100 percent since some households borrow from sources in more than one category. Adjusted standard errors in parentheses.

Table 2: Creditworthiness and assets

	Below poverty line		Per capita income is 1 to 3 times the poverty line		Per capita income is more than 3 times the poverty line	
Creditworthy?	38	(5)	64	(4)	82	(5)
Assets						
Fixed assets (million rupiah)	25.5	(3)	37.7	(4)	99.9	(22)
Assets with legal title (percent)	24	(9)	27	(5)	44	(6)
Assets with other documents (percent)	68	(8)	69	(6)	54	(6)
Observations	330		617		485	
Reasons for lack of creditworthiness (percent)						
Security deficient	1.9	(1.2)	3.6	(2.6)	3.8	(3.8)
Income deficient	81.3	(5)	78.1	(5)	68.4	(13.2)
Poor character/history	1.7	(1.7)	0.3	(0.2)	0.04	(0.04)
Administrative problems/other	15.1	(3.8)	17.9	(5.5)	27.7	(11.6)
Observations	168		215		81	

Reasons articulated by enumerators' professional and confidential assessment of creditworthiness. Adjusted standard errors in parentheses.

Table 3:

Return on total assets (monthly) and enterprise attributes within income groups

Conditional on ownership of a household enterprise

	Below poverty line		**Per capita income is 1 to 3 times the poverty line**		**Per capita income is more than 3 times the poverty line**	
Return on assets						
Full sample	0.13	(0.02)	0.21	(0.02)	0.22	(0.03)
If creditworthy	0.13	(0.02)	0.19	(0.02)	0.22	(0.03)
Enterprise attributes						
Quiet months	7.7	(0.9)	5.3	(0.6)	4.4	(0.7)
High risk (percent)	4.2	(1.8)	4.9	(1.7)	7.8	(3.0)
Observations	330		617		485	

Returns on assets are not corrected for unpaid own-labor contributions. Adjusted standard errors in parentheses. Returns on assets are trimmed at top and bottom 5%.

Table 4:

Desired loan sizes (percent)

	Below poverty line		Per capita income is 1 to 3 times the poverty line		Per capita income is more than 3 times the poverty line	
Small desired loan size?						
Full sample	58	(7)	27	(4)	15	(4)
If have an enterprise	54	(7)	21	(3)	18	(5)
If creditworthy	42	(9)	17	(3)	8	(3)
If not creditworthy	67	(11)	45	(8)	44	(10)
Observations	330		617		485	

"Small loan" is an indicator for desiring a loan size smaller than the December 2002 "break-even level" of Rp. 1,936,606. Adjusted standard errors in parentheses.

Table 5: Saving behavior within income groups (percent)

	Below poverty line		Per capita income is 1 to 3 times the poverty line		Per capita income is more than 3 times the poverty line	
Has a saving account or device	15	(4)	43	(5)	72	(5)
Among savers, percentage with:						
• BRI account	10	(3)	22	(4)	34	(6)
• Any formal account	11	(4)	32	(4)	56	(6)
• Microbank account	2	(1)	6	(2)	7	(2)
• Informal saving	2	(1)	4	(2)	6	(2)
Among savers:						
Save but do not borrow	62	(9)	45	(6)	28	(4)
• Creditworthy?	46	(13)	66	(9)	86	(6)
• Creditworthy but averse to debt	24	(9)	26	(5)	55	(11)
Observations	330		617		485	

Reasons articulated by enumerators' professional and confidential assessment of creditworthiness. Adjusted standard errors in parentheses.

Table 6: Loan uses

Uses of loans (percent) of households within income groups that took loans for business, household, and other purposes

	Below poverty line		Per capita income is 1 to 3 times the poverty line		Per capita income is more than 3 times the poverty line	
Loan use						
Business	49	(6)	55	(6)	57	(8)
Household	35	(9)	43	(7)	45	(7)
Other	23	(8)	6	(3)	7	(5)
Observations	68		201		269	
Household enterprise?	85	(7)	78	(4)	67	(8)
Loan use if household has enterprise						
Business	57	(8)	70	(5)	71	(8)
Household	27	(8)	26	(6)	32	(6)
Other	16	(8)	6	(3)	7	(7)
Observations	55		145		168	

Notes: Loan uses sum to over 100 percent within income groups since some households take loans from different sources for different purposes. Uses are for the last loan taken from each source. Loans for business include those used for working capital of existing venture, Diversify income, starting a new business, purchasing new equipment, new business infrastructure (e.g., store or warehouse), or business infrastructure improvement. Loans for the household include home improvement, non-business land or building purchase, school tuition, medical treatment, loan repayment, meeting daily needs or retirement needs, vehicle purchase, buying household goods, ceremony or social expenditure, holiday needs, or jewelry purchase. Other uses are described as "other" by respondents and include mixed uses. Adjusted standard errors in parentheses.

Table 7: Loan uses by institution

	Below poverty line		Per capita income is 1 to 3 times the poverty line		Per capita income is more than 3 times the poverty line	
Formal bank (BRI or other)						
Business	59	(12)	62	(5)	57	(9)
Household	24	(11)	36	(6)	47	(7)
Other	30	(12)	7	(4)	7	(4)
Observations	36		140		253	
Microfinance or informal source						
Business	33	(14)	40	(12)	56	(10)
Household	55	(15)	63	(12)	37	(9)
Other	26	(14)	6	(4)	15	(12)
Observations	38		64		50	

Notes: See notes to Table 6on loan uses. The figures give the fraction of borrowers within each income group who has borrowed for the stated use. The sum of loan uses by income group exceeds 100 percent since households may have taken multiple loans for varying purposes. See Table 1 for bank definitions.

Table 8: Desired loan uses if household would have access to formal bank loan (percent)

	Below poverty line		Per capita income is 1 to 3 times the poverty line		Per capita income is more than 3 times the poverty line	
Desired loan use						
Business	69	(6)	69	(3)	56	(8)
Household	48	(10)	52	(6)	79	(14)
Other	22	(14)	17	(9)	16	(7)
Observations	278		465		285	

See notes to Table 7 on loan uses. Adjusted standard errors in parentheses.