Financial (Dis-)Information

Evidence from an Audit Study in Mexico

Xavier Giné

Cristina Martínez Cuellar

Rafael Keenan Mazer

The World Bank
Development Research Group
Finance and Private Sector Development Team
June 2014

Abstract

An audit study was conducted in peri-urban Mexico to understand the quality of information and products offered to low-income potential customers. Trained auditors visited multiple financial institutions seeking credit and savings products. Consistent with Gabaix and Laibson (2006), staff voluntarily provides little information about avoidable fees, especially to auditors trained to reveal little knowledge about the market. In

addition, clients are almost never offered the cheapest product, most likely because staff is incentivized to offer more expensive products that are thus more profitable to the institution. This suggests that disclosure and transparency policies may be ineffective if they undermine the commercial interest of financial institutions.

This paper is a product of the Finance and Private Sector Development Team, Development Research Group. It is part of a larger effort by the World Bank to provide open access to its research and make a contribution to development policy discussions around the world. Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at xgine@worldbank.org.

The Policy Research Working Paper Series disseminates the findings of work in progress to encourage the exchange of ideas about development issues. An objective of the series is to get the findings out quickly, even if the presentations are less than fully polished. The papers carry the names of the authors and should be cited accordingly. The findings, interpretations, and conclusions expressed in this paper are entirely those of the authors. They do not necessarily represent the views of the International Bank for Reconstruction and Development/World Bank and its affiliated organizations, or those of the Executive Directors of the World Bank or the governments they represent.

Financial (Dis-)Information: Evidence from an Audit Study in Mexico*

Xavier Giné

Development Economics Research Group, World Bank

Cristina Martínez Cuellar

The University of Chicago

Rafael Keenan Mazer

CGAP, World Bank

Keywords: financial information, audit study.

JEL codes: D14, D91, G02, G21, O16.

* Giné: xgine@worldbank.org. Martínez: cristinam@uchicago.edu. Mazer: rmazer@worldbank.org. We thank CONDUSEF and in particular Jesus Chavez Ugalde and Maria Fernanda Saldivar Cortes for their constant encouragement and support. We also thank the team at IPSOS for data collection. We are grateful to Sumit Agarwal, Santosh Anagol, Matthew Bird, Eva Gutiérrez, María Soledad Martínez-Peria, David Medine, José Luís Negrín Claudia Ruiz, Enrique Seira and Bilal Zia for helpful comments and to the Russian Trust Fund and the Knowledge for Change Program (KCP) for funding.

1. Introduction

Many financial decisions are made infrequently and without immediate feedback that can be used to improve decision-making (Thaler and Sunstein, 2008). In addition, these decisions may involve unfamiliar concepts especially to individuals with limited financial capabilities (Lusardi and Mitchell, 2007, 2014) and as a result financial consumers may not necessarily choose the most cost-effective product or the one most suitable to their needs (see for example, Gross and Souleles, 2002; Choi et al., 2011; Duarte and Hastings, 2011; Hastings et al. 2012; Agarwal et al. 2013 and Campbell et al. 2011 and DellaVigna 2007 for reviews).¹

More generally, mistakes in financial decision-making would be less of a concern if market forces led to a set of relatively cheap financial products. However, this is rarely the case. Table 1 reports summary statistics for all credit and savings products offered by the 26 institutions that were part of the study targeted to low-income households. The total annual cost of a 10,000 pesos loan (748 USD) ranges from 10.71 percent to 326.53 percent. The total annual yield for savings products with an initial deposit of 5,000 pesos (374 USD) exhibits a similar pattern. The yield ranges from -63.60 percent to 6.17 percent for an investment account and from -100 percent to 5.12 percent for a checking account. This large price dispersion is the result of a market failure created by the information asymmetry between less informed customers and better informed financial institutions and the misalignment of their incentives.

Many governments around the world have tried to reduce the information asymmetry by introducing legislation to improve disclosure and transparency, and in some cases have mandated that low-cost savings products be offered in the marketplace or have imposed usury laws capping the interest rate that can be charged on credit products (Chien, 2011). From a political economy perspective, mandated disclosure laws are easy to enact because they only require the provision of information leaving the actual products unregulated.

An early example of mandated financial disclosure is the Truth in Lending Act of 1968 which required that consumers in the US be presented with key financial terms for credit products, and standardized the calculation of certain key product terms and disclosure formats. Mexico enacted a similar law in 2009 and in addition, as part of the Law on Credit Institutions of 2007 the Bank of Mexico requires that all deposit-taking institutions offer a “basic account” without account opening, deposits, withdrawals, balance enquiry fees, or debit card fees.²

¹ Agarwal et al. (2013) find that if feedback is fast enough, then financial learning can occur, albeit the hard way: credit card fees paid by new card holders fall during the first three years after account opening because after paying a fee, consumers adjusted their behavior to avoid paying it in the future.

² Table 1 also reports the summary statistics for mandated basic savings accounts offered by the institutions in the study. As expected, the mean in annualized yield is higher and variation is lower than that of checking accounts, and they do not vary by whether avoidable fees are included or not, since most of the basic accounts do not charge avoidable fees. We note that only data for 13 of the 26 institutions are reported in Table 1. While all institutions must offer the account, they are free to set a

The crisis of 2008 that originated in the US mortgage markets is a painful reminder that these efforts may not have been successful in improving the financial outcomes of the population (see for example Lowenstein, Sunstein and Golman, forthcoming). Indeed, the reason why consumers may remain misinformed and prone to making mistakes is because financial institutions shroud prices, even in competitive environments with strict disclosure and pricing transparency rules in order to maximize profits (Ausubel, 1999; Gabaix and Laibson, 2006; Heidhues, Koszegi and Murooka, 2013). Firms will therefore adjust their behavior to undermine transparency initiatives (Duarte and Hastings, 2011) and may not put much effort in marketing mandated products.

This discussion brings to the fore two interrelated questions that are the focus of this paper. First, what is the *quality of information* provided by financial institutions to low-income customers when choosing among credit and savings products? Second, do financial institutions *offer the product that best meets the customer needs*, in particular as it relates to cost and intended usage?

To answer these questions, we implemented an audit study in peri-urban areas near Mexico City. Auditors visited the branches of financial institutions seeking to acquire a loan or a savings product. Since the goal was to capture all the information given to the auditor until the product was contracted (or the auditor was rejected in the case of credit), several follow-up visits were required. Indeed, follow-up visits at the house of credit auditors were common and for this reason we recruited and trained local residents to serve as credit auditors instead of relying on professional auditors.

The scripts used by auditors were designed in collaboration with Mexico's National Commission for the Defense and Protection of Financial Service Users (CONDUSEF) and differed along four dimensions. First, we introduced variation specific to the product sought. Savings auditors expressed a preference for either a checking account to manage their day-to-day financial needs or an investment account where funds would be deposited for a minimum duration of one year. Credit auditors requested a loan amount of either 20 percent or 70 percent of their household's annual income, thus creating exogenous variation in the level of household indebtedness. Second, we varied the financial sophistication of the auditor made salient by the language used and the level of engagement during the visits. Third, we varied the level of competition among sophisticated auditors by stating that a competing institution had offered them better terms. Finally, we created variation in the dress code used during the visit. Each auditor was given a randomized list of branches to visit and was randomly assigned to a script.

In order to make sense of the results, the model of Gabaix and Laibson (2006) provides a useful framework. In the presence of enough uninformed customers, the model predicts that firms in equilibrium will fail to advertise certain fees and commissions that uninformed customers will end up paying and

minimum balance requirement. For the remaining 13 institutions, this minimum was set above 5,000 Pesos in which case the account is no longer accessible.

informed customers will try to avoid. Thus, advertising will be deceptive rather than informative and in fact, firms will have no incentive to de-bias customers.³

Consistent with these predictions we find that the staff provided enough information to allow auditors to apply for the loan or to open the savings account, but that very little voluntary information about avoidable fees and commissions was provided to unsophisticated auditors. In addition, the printed materials given to auditors of all profile types contained too little information to be useful for comparisons across products.

Related, while savings auditors were offered products that matched their preference for maturity, they were rarely offered the cheapest product. The mandated basic account was only offered in 2 of the 54 visits in which the auditor expressed a preference for a checking account. By contrast, when faced with credit auditors requesting large amounts, financial institutions demonstrated ability to assess the capacity to pay of borrowers by both being more likely to reject their loan application and by reducing the amount granted if the application was finally approved.

Thus, firms seem to behave rationally by following their own self-interest which may explain why the recent policy initiatives around product transparency and basic savings accounts have been met with little success.⁴ The limited impact of policies to promote transparency and mandated products is not new, and in this sense the paper contributes to the recent literature that uses audit studies to assess advice for financial investment (Mullainathan et al, 2012) and life insurance (Anagol et al, 2012) and access to savings products (Mowl and Boudot, 2014).⁵

The remainder of the paper is organized as follows. Section 2 describes the financial market for low-income households in Mexico. Section 3 reviews the predictions of Gabaix and Laibson (2006). Section 4 describes the experimental design while Section 5 describes the data and empirical strategy. Section 6 reports the results and Section 7 concludes.

2. Context

Financial markets in Mexico have recently been transformed by the appearance of new providers like the consumer goods chains Elektra, Wal-Mart and Coppel, and new intermediation channels such as agent

³ We note that if consumers were rational, then shrouding would actually hurt the financial institution, as consumers faced with impartial disclosure of fees and commissions would assume they are high and purchase from banks that disclose more information. Shrouding behavior by banks would thus unravel, forcing banks to disclose all the information (Grossman, 1981; Jovanovic, 1982; Milgrom, 1981). There is evidence however suggesting that consumers tend to ignore not only information that is not disclosed (see Nisbett and Ross, 1980 for an early review), but also disclosed information that is not made salient (Finkelstein, 2009 and Chetty, Looney and Kroft, 2009).

⁴ According to Banco de México (SISPAGOS), only 5 percent of the checking accounts to the general public in Mexico are mandated basic accounts.

⁵ Audit studies have been used elsewhere to study for example police performance (Banerjee et al. (2012), drug quality (Bennett and Yin, 2013) and hold-up in contracting (Iyer and Schoar, 2012).

and mobile banking. This increase in the supply of financial services has coincided with a rapid expansion of household debt to GDP from 8.7 percent in 2000 to 14.3 percent in 2011, with a recent study estimating debt service at 35 percent of household income (Lopez-Bolaños, 2012). Among the components of household debt, consumer debt has been a key driver of this increase, rising from 7.7 percent in 1994 as a share of banking sector debt to 23 percent in 2011.⁶ Consumer credit in 2011 represented 40 percent of all bank earnings in interest, commissions and annual fees. Much of this growth in consumer credit comes from bringing low-income individuals that relied on informal sources into the formal financial system for the first time. These individuals tend to have lower levels of education and may thus be worse equipped when deciding among financial products (Lusardi and Mitchell, 2011). According to the 2008 Mexican Income and Expenditure Survey (ENIGH), 42 percent of households making a credit card payment had a head of household with less than high school education and one in six had only primary education or less (Bruhn, Ibarra and McKenzie, 2013). The irregular (and sometimes unpredictable) income flows of many low-income individuals suggest that more flexible credit and savings products will be more suitable than others with stiff penalties for missed or partial installment payments or high minimum balance fees. In addition, financial products offered to low-income households tend to be relatively more expensive because they entail either smaller loan amounts (or higher risk) or smaller savings balances that are more expensive to administer.⁷ For all these reasons, this study focuses on consumer credit and savings products targeted to low-income households.

Savings and credit products in Mexico are offered by a range of financial institutions including the new players that have a particular focus on low and middle-income Mexicans. These include banks established by large retail chains, such as Banco Walmart, Banco Azteca (part of the Elektra Group, affiliated with the Elektra retail chain), Banco Coppel and Banco Ahorro Famsa, as well as credit providers that have recently obtained banking licenses, such as Banco Compartamos. Besides these banks, the commercial banking sector also includes “traditional” banks such as HSBC, Banorte, Bancomer and Banamex.

Sociedades Cooperativas de Ahorro y Préstamo (SCAPs, more commonly known as Cajas de Ahorro) are non-profit, cooperative-based institutions and offer both credit and savings services. Sociedades Financieras Populares (SOFIPOS) also offer both credit and savings products, typically serving low-income consumer segments, but unlike Cajas de Ahorro they are not considered non-profit

⁶ According to a series of focus groups we conducted at the time of the study, low-income households mainly use credit to either finance an emergency or a durable asset.

⁷ In the credit card market, Scholnik, Massoud and Saunders (2013) find evidence that poorer consumers are more likely to incur unnecessary late fees and overlimit fees even when funds in their deposit accounts were available. In Mexico, using CONDUSEF’s online calculator we find a total annual cost for a 12 month loan of 100,000 Pesos ranges from 19.3 percent and 154.4 percent; while total annual cost for a percent for a 12 month loan of 10,000 Pesos ranges from 22.6% to 190.1%. Source: http://e-portalif.condusef.gob.mx/condusef_personalnomina/captura.php, accessed on October, 16, 2013.

institutions. Sociedades Financieras de Objeto Multiple (SOFOMs) only offer credit products as they are not permitted to collect deposits.⁸ SOFOMs were nevertheless included in the savings audit to verify that they were indeed not accepting deposits.⁹

Finally, institutions that offer savings products include banks, cooperative societies (Cajas de Ahorro), and Popular Financial Societies (SOFIPOS). All these institutions offer both checking and fixed-term accounts with an initial deposit as low as 1 peso.

Despite the diversity of institutions offering financial services, there are two related indications that there is little competition at least in cost, similar to other countries: lack of product information made available to the consumer, and high cost of credit and savings products.

Focus groups conducted with low-income clients recruited from the study areas around the time of the audit study revealed that terms advertised in marketing materials and communicated by sales representatives did not accurately reflect the actual costs of the credit products they selected, making it hard to assess the true cost of a product before signing the contract. In addition, few of the participants understood the concepts of total annual cost and total annual earnings (CAT and GAT, respectively), and therefore did not use these terms in their decision to purchase credit or savings products. Similarly, participants cited several cases where they had lost a significant fraction of their savings balance due to fees assessed on their accounts that were not known at the time when the savings account was opened. The fees responsible for the reductions in savings balances were mostly avoidable fees such as the minimum balance requirement fees, activity fees (charged when a certain number of withdrawals per month is exceeded), and inactivity fees (for not depositing additional funds over a certain period of time).

From a policy perspective, mistakes in financial decision-making due to limited information would be less of a concern if all financial products offered were relatively cheap. However, despite the recent entry of new players in the Mexican market, the cost of financial products in Mexico remain average when compared to other countries and it varies drastically depending on whether the fees just described are incurred (World Bank, 2008). According to the Bank of Mexico (2013), competition in consumer credit markets remains low especially when compared to mortgages or business loans.

[TABLE 1 HERE]

Table 1 reports summary statistics for all credit and savings products that could have been offered by all 26 financial institutions in the audit study to clients between June and August 2012, the period in which

⁸ SOFOMs are divided between regulated and non-regulated SOFOMs, and the latter do not have to report financial information to the National Banking Commission (CNBV), but must comply with consumer protection regulations set forth by CONDUSEF.

⁹ While SOFOMs accounted for only 1.3% of all complaints registered by consumers made with the financial consumer protection agency in Mexico (CONDUSEF) in 2011, the number of cases leading to a fine being assessed were nearly twice as many for SOFOMs as any other provider type, despite being a relatively small share of the market and only offering credit products (CONDUSEF, 2012).

the study was implemented. For consumer credit loans, Table 1 reports the total annual cost of a 10,000 peso (780 USD) loan to be repaid over one year in 12 monthly installments.¹⁰ For savings products Table 1 reports the total annual earnings from a 5,000 pesos (390 USD) deposit in a term account and in a checking account. The table presents two different costs (or returns) depending on whether or not avoidable fees are incurred. The reason for presenting costs and returns this way is that information (or lack thereof) on avoidable fees is relevant since behavior can be adjusted to avoid paying them. For example, a well-informed borrower could have borrowed from elsewhere to meet the installment payment obligation and avoid a high late payment fee while a well-informed saver could have timed the deposits and withdrawals from the account in such a way to prevent the balance from falling below the minimum thus avoiding the minimum balance fee.

Thus, when the total cost (and return) include only fees that must be incurred to acquire the product (i.e. unavoidable fees) the cost refers essentially to the CAT and GAT (equivalent to the US APR or APY). But because avoidable fees are only incurred if the client engages in certain behavior, the reported cost and returns inclusive of avoidable fees are computed using a hypothetical usage profile. For credit, we assume that the client misses one payment; for fixed term we assume that the client withdraws part of the money before the maturity (at 6 months) while keeping the remainder until the end of the year, and for the checking account, we assume that the client maintains an average balance below the minimum for 2 months per year. According to Table 1, the total cost of credit products offered by the 26 institutions that were included in the audit study was 24% without avoidable fees, and 26% if avoidable fees are also taken into account. Annualized yields for savings products exhibit a similar pattern. Investment accounts yield on average 1.01% without avoidable fees, and 0.39% if avoidable fees are included. Checking accounts have lower (negative) annualized yields of -7.36% without avoidable fees, or -9.10% on average if avoidable fees are taken into account. Considering only government-mandated basic checking accounts, the average yield was -0.77% without any avoidable fees, and -0.86% with the avoidable fees.

Table 1 suggests that small differences in behavior can have large impacts on the cost or return of a product, especially for credit and checking accounts, and thus, accurate information on overall costs and in particular avoidable fees can save customers sizeable amounts. The cost comparisons also demonstrate how, for most small balance savers, the government-mandated account is cheaper than most checking accounts, and that it actually offers average returns that are only \$89 pesos (approximately \$6.93 USD) lower over a 12-month period without avoidable fees, and \$62 pesos (approximately \$4.83 USD) lower over a 6-month period with the avoidable fees than the average return of the investment accounts in the sample.

¹⁰ Since auditors asked for either 20% or 70% of household income, the average loan size was 18,388 pesos and the median was 13,500 pesos.

The model of Gabaix and Laibson (2006) to which we now turn can account for the variation in costs and yields reported in the data and it therefore provides a useful starting point to study the quality of information about financial products offered to prospective clients by the staff of financial institutions.

3. Theory

Recasting the example in Gabaix and Laibson (2006), imagine that a bank can offer a 2 percent deposit rate on a savings account so long as it can also charge a fee whenever the average monthly balance falls below a certain minimum, to break even.¹¹ If the fee is not assessed, the institution can only offer a 1 percent deposit rate. Suppose that there are two types of customers, naïve and sophisticated. Naïve customers are not informed about the minimum balance fee (or do not understand it) and thus decide which account to open based on the highest deposit interest rate offered. In contrast, sophisticated customers know about the fee. Assume further that if customers do not take action, the timing of their deposits and withdrawals is such that the average balance will fall below the minimum thus resulting in the minimum balance fee being assessed by the bank. Customers however can exert some effort to change the timing so that the balance never falls below the minimum.

In this setup, banks will market accounts with a 2 percent deposit rate, failing to mention the minimum balance fee, to attract naïve customers. Given the assumptions made, all naïve customers will end up paying the minimum balance fee, unaware of it. Sophisticated customers will also be attracted to the 2 percent deposit rate but will never pay the minimum balance fee as they will take action to avoid it. Banks will therefore make enough money from naïve customers to cover the losses from offering the account to sophisticated consumers: naïve customers will cross subsidize the sophisticated ones. Note that if a bank decided to price the savings account more transparently, offering savings accounts at 1 percent without the minimum balance fee, no customer would be attracted to the 1 percent account because it offers a lower interest rate. All customers would still demand the 2 percent savings account, naïve customers failing to realize that they will end up paying the minimum balance fee and sophisticated ones realizing that they are better off earning 2 percent and avoiding the minimum balance fee altogether.¹² The equilibrium is thus one in which financial products offered have hidden fees that are only taken into account by sophisticated consumers. More formally, the following testable implications can be derived:

1. Banks will not engage in informative marketing. Marketing campaigns, if any, will advertise the deposit rate but not the minimum balance fee for savings. Similarly, marketing campaigns for

¹¹ Note that this fee will only be assessed to the subset of customers whose average balance falls below the minimum. We assume that the bank knows this fraction of customers in the population and that given the deposit rate offered, it can calibrate the fee to break even.

¹² Alternatively, naïve customers could understand the fee structure but be overoptimistic about the chances of their savings balances falling below the minimum. In either case, they would prefer the 2 percent account over the 1 percent account offer.

credit products will not advertise the total cost of the credit nor the detailed fees and charges. In other words, campaigns will be mostly persuasive.

2. Both naïve and sophisticated customers are aware of all basic requirements, *unavoidable* fees and other terms to open an account. For example, all customers know the interest rate earned on deposit products or the interest rate charged on credit products.
3. Naïve customers are unaware of *avoidable* fees and commissions such as the minimum balance fee on deposit accounts or the late payment fee in credit products.
4. Naïve and sophisticated customers are offered the same product, but naïve customers will earn less (if any) interest on savings (or pay more interest for credit) as they also pay fees and commissions.

In Section 6 we test these predictions more formally.

4. Experimental Design

The audit study was conducted in collaboration with Mexico's National Commission for the Defense and Protection of Financial Service Users (CONDUSEF), the government authority established in 1999 and responsible for financial consumer protection and financial education programs.

Four towns near the greater metropolitan region of Mexico City were selected with populations ranging from 30,000 to 1,600,000: Amecameca, Cuernavaca, Ecatepec, and Los Reyes de la Paz. These towns were selected for their high penetration of financial institutions targeting low-to middle-income consumers, and for their proportion of low-to middle-income population.¹³ From the town center, a radius of 1.5 Km was drawn and every financial institution inside the circle was included in the study. We found a total of 26 distinct institutions with 62 branches, of which 13 were banks, 2 were Cajas de Ahorro (SCAPs), 4 were SOFIPOs, and 7 were SOFOMEs. For the purposes of the analysis we group the banks into commercial banks (Scotiabank, HSBC, Banorte, Banamex, etc) and "low-income" banks that target low-income households (Banco Ahorro Famsa, Bancoppel, Compartamos Banco, Banco Walmart and Banco Azteca). Of the low-income banks, all but Banco Compartamos had their branches located inside the department stores of which the banks were a subsidiary, since Banco Compartamos is not affiliated to a department store.

Credit auditors requested a 6-month loan for a household expenditure preferably with monthly installments. The expenditures included house repairs, medical expenses and children's school supplies, among others. Savings auditors were assigned a quantity of 5,000 Pesos (USD 378) that they wanted to deposit.

Since we wanted to capture all the information that staff would provide to prospective clients up

¹³ Although there are considerable disparities in access by region and between rural and urban populations, the towns selected are similar to other peri-urban towns in Mexico.

until the signing of the credit contract or opening of savings account, a visit by the auditor was deemed completed when either the institution refused to open the account or grant the loan or when the auditor was asked to sign the contract. While most savings auditors needed only one visit to gather all the information and be offered the chance to open the account, credit auditors needed up to 4 follow-up visits (with an average of 1.87 visits), some at their residence, before they were offered the opportunity to sign the credit contract. Because credit auditors had to reside locally, we could not use professional auditors. Instead, we recruited 18 auditors from low-income households (4 or 5 auditors in each town) that were trained by a full-time professional from a survey firm. There were 7 men and 11 women, with ages ranging from 21 to 53. Education levels were average for the population, 13 had secondary education and 5 had undergraduate education. In terms of income generation activities, 7 were self-employed and 11 had a salaried job. Credit auditors made 215 visits and a total 115 auditor-branch pairs since multiple visits were needed to complete the loan application process. Savings auditors were professionals from the same survey firm but they all also came from low-income households. Each of the 4 auditors visited roughly 7 different branches in each town and collectively carried out a total of 112 visits. Since SOFOMs cannot take deposits by law, we included SOFOMs in the list of institutions to assess whether they complied with the law.¹⁴

Credit and savings visits took place between the months of March and June 2012. Given that a total of 26 different financial institutions were visited, a branch in a given site was always visited by more than one auditor.¹⁵ Each visit was recorded with a hidden digital recorder, and after each visit the auditor was required to complete a questionnaire that was validated with the audio recording.

Immediately after recruitment, auditors were randomized into savings and credit scripts. To minimize confusion among credit auditors, a given auditor was assigned and trained on the same script that would thus be implemented in all of his or her visits. Savings auditors were professionals and thus alternated between different scripts. Auditors memorized the script(s) and used a uniform language when asking about the products. During the training the auditors and field manager were never told about the purpose of the study nor the specific hypotheses we wanted to test.

The scripts varied along three dimensions: financial sophistication or literacy, the degree of perceived competition and the dress code used in the visit.

Financial Literacy: Auditors were assigned to be either experienced or neophytes. Experienced auditors were trained to mention at the outset of the visit that they were shopping around for the best product and that they had reviewed product offers from other institutions. During the visit, they had to demonstrate knowledge of certain terms and if the staff did not voluntarily provide certain product information they had

¹⁴ The law regulating SOFOMs is the *Ley General de Organizaciones y Actividades Auxiliares de Crédito*, National Banking Commission of Mexico.

¹⁵ On average each branch was visited by 1.71 savings auditors and 2.39 credit auditors.

to ask for it. For savings products they had to ask for the minimum balance required to open the account, interest rate, GAT (total annual earnings), fees and commissions, and whether there was a linked debit card. For credit products, the experienced auditor had to ask about the total loan amount, total amount received, the term of the loan, the frequency and amount of each installments, other costs and fees, interest rate, CAT (total annual cost), and the time lag for approval and disbursement. Neophyte auditors did not mention that they were shopping around nor that they had received other product offers.

In sum, experienced shoppers explicitly asked for certain avoidable fees and commissions if the staff did not provide information voluntarily while neophyte auditors did not. The reason for this treatment was to assess the amount of information provided by the staff either voluntarily or when prompted.

Competition: Among experienced auditors, half mentioned that they were offered a lower interest rate in another institution while the other half mentioned that they were offered a higher interest rate while shopping around at other institutions. The goal of this treatment was to assess the degree of flexibility of the staff in offering product terms that could match the competition.

Dress Code: Auditors were also instructed to alternate the way they dressed for each branch. In half of the branches that each shopper visited they would dress formally (the attire for a special event or church) while for the rest they would dress informally. Since credit auditors could have follow-up visits to the same branch, they were instructed to dress formally or informally for *all* the visits to that particular branch.¹⁶

In addition, scripts differed in a product-based variation related to the savings needs or the level of over-indebtedness.

Specific savings needs: Savings auditors wanted to make a deposit for either one full year, indicating a preference for an investment product, or to make frequent transactions, indicating a preference for a checking account.

Over-indebtedness: Credit auditors were assigned a loan amount resulting in a total household level of indebtedness of either 20 percent (low indebtedness) or 70 percent (high indebtedness). This treatment amounted to loan sizes that ranged from 1,000 to 55,000 Mexican pesos. Auditors assigned to the high indebtedness script asked on average for 10,350 Mexican pesos more (774 USD), an amount that is statistically significant at the 1 percent level. The purpose for this treatment was to assess whether credit officers reduced the loan amount approved or whether they fudged the income numbers in the application to approve the loan (Berg, Puri and Rocholl, 2013).

The combination of these variations resulted in 6 different scripts for credit and savings auditors.¹⁷

¹⁶ Although most shoppers followed this instruction, there are 13 cases in credit where the shoppers alternated their dressing profile within the multiple visits to a same institution. For these cases, in the analysis we used the dressing profile treatment that they did in the first visit.

¹⁷ The 6 scripts used for credit auditors are: (Experienced, High Competition and High Indebtedness), (Experienced, High Competition and Low Indebtedness), (Experienced, Low Competition and High Indebtedness), (Experienced, Low Competition

5. Data and Empirical Strategy

We use data from 3 different sources. First, the questionnaire filled by auditors after each visit which covers various aspects of the visit, including the length of the visit, the products offered and their features, and quality of the service provided. Second, the printed materials that the staff handed to the auditor, consisting of either leaflets about the product or, less frequently, personalized amortization tables when credit was requested. For credit, out of the 54 printed materials given to the auditors, 49 were advertisements and generic leaflets, while only 5 were personalized amortization tables. The third data source comes from CONDUSEF and it consists of a dataset with the terms of all the savings and credit products offered by the institutions at the time of the study. Many of the terms were not available online and had to be requested directly from the institution. The dataset only includes credit products with loan sizes in the range requested by the auditors, and savings products that can be contracted with an initial deposit of 5,000 Pesos. These data are used to generate Table 1 and to match the products that were actually offered to the auditors to compare their cost against the rest of products offered by the institution.

We use data from the questionnaire, printed materials and CONDUSEF to construct variables related to the amount of information provided by the institutions. We divide the information into the following categories: legal requirements to open the account or to take out the loan, terms of account, and fees and commissions—most of which depend on usage and are therefore avoidable. The items of information that the staff could provide for each category vary by product.

For savings products, the items in “legal requirements” include the need to show (i) an official identification number and (ii) an address certificate. The items in “terms of the account” include (i) whether or not the client needs to be a member of the institution to open an account; (ii) the minimum balance required to open an account; (iii) the maturity of the account; (iv) whether a debit card is provided; (v) the interest rate offered and whether it is fixed or variable; (vi) the total annual earnings (GAT); (vii) the deposit insurance tax and (viii) the tax on earnings. The “fees and commissions” include: (i) fee if average balance falls below minimum balance; (ii) inactivity fee; (iii) early withdrawal fee for investment accounts; (iv) withdrawal fee; (v) balance inquiry fee and (vi) debit card repossession fees. In sum, the “legal requirements” and “terms of the account” include requirements and unavoidable costs to open the account while “fees and commissions” are additional costs that can be avoided through usage behavior.

and Low Indebtedness), (Neophyte and High Indebtedness) and (Neophyte and Low Indebtedness). The 6 scripts used for savings auditors are similar, replacing High Indebtedness by Preference for Investment account and Low Indebtedness by Preference for Checking account. As mentioned, each credit auditor was assigned one script, while savings auditors were assigned to be either Experienced or Neophytes, and to have a preference for either an investment account or a checking account, but if they were assigned the Experienced profile, they alternated between High and Low Competition scripts.

For credit products, the “legal requirements” includes in addition an income certificate. The “terms of the account” include the need to (i) be member/client of the institution; (ii) save before the loan can be acquired; (iii) have a checking account in the institution; (iv) the amount lent; (v) the amount disbursed; (vi) the total amount due; (vii) the amount of each installment; (viii) the value added tax; (ix) the interest rate and whether it is fixed or variable; (x) the total annual cost (CAT); (xi) the maturity; (xii) frequency of payments; and (xiii) the number of installments. The “fees and commissions” include: (i) the premium for unemployment and/or life insurance; (ii) administrative commissions; (iii) the cost of the credit bureau check; (iv) the membership fee; (v) early payment fee; (vi) late payment fee and (vii) a fee for the payment of installments in other branches or institutions. Similar to the savings categories, the “legal requirements” and “terms of the account” include requirements and unavoidable costs to obtain the loan while “fees and commissions” are additional costs that can mostly be avoided through usage behavior.

There are therefore up to 16 items of information for savings products and 23 items for credit products we measured that could potentially be provided to auditors by sales staff. Clearly not all are equally relevant or important. For this reason we construct 2 sets of measures for each product offered. The first simply involves counting the items of information in each category. For example, if the staff mentioned that a savings auditor needed to show an official identification number and an address certificate, the variable would take the value 2 (of the possible 2 items). But because certain items of information may be irrelevant if they are not required or do not apply, we also construct a set of variables that reflect the percentage of items of information that are relevant for the product offered by the staff. The numerator in this variable is the number of items mentioned (among those that are relevant for the product) and the denominator is the number of items either required or relevant. For example, if a product has a withdrawal fee, then the item will be included in the denominator for the fees and commission category and will appear in the numerator if the staff mentioned the fee.¹⁸

In addition to the information provided we assess the cost of the product offered and compare it to similar products offered by the institution and the market. Similar to the costs reported in Table 1, we compute the total costs and earnings with unavoidable fees only, using the formulas for total annual cost and total annual earnings (CAT and GAT), and the total costs including the most commonly assessed avoidable fees. In particular, we assume that credit clients will miss one payment and will thus be assessed a late payment fee and that savings clients will either withdraw early for those contracting an investment account or will maintain a balance for 2 months below the minimum.¹⁹

¹⁸ In this example, if there was no withdrawal fee, then it would not appear in the numerator or denominator although the staff could have mentioned that such a fee was not assessed.

¹⁹ These usage profiles come from discussions with CONDUSEF and focus groups about the average behavior of low-income consumers with personal credit products and savings accounts.

Because the assignment of scripts to auditors was random, we can run the following OLS regression for savings visits:

$$y_{ij} = \beta_1 HL_i * HI_i + \beta_2 HL_i * LI_i + \beta_3 INV_i + \beta_4 F_i + L_j + \varepsilon_{ij} \quad (1)$$

where y_{ij} is the outcome of interest for auditor i visiting institution j , HL_i is an indicator for high literacy, HI_i is an indicator for high interest rate (high competition), and LI_i is an indicator for low interest rate (low competition). In addition, INV_i is a dummy that takes the value of 1 if the auditor has a preference for an investment account or fix term deposit (0 if savings/checking account) and the dummy F_i takes value 1 if the auditor was dressed formally during the visit. The variable ε_{ij} is a mean-zero error term. The regression specification also includes dummies for each type of financial institution (L_j). Robust standard errors are included.²⁰

For credit auditor-branch pairs, a similar specification is used. Note that if the pair involved more than one visit, the outcomes are aggregated up to the pair level. Instead of INV_i dummy, we include an HD_i dummy that takes the value of 1 if the auditor asked for a loan representing 70 percent of its household income (0 if asked for a loan representing 20 percent of its household income). In this specification we include a vector of auditor characteristics X_i because given the relatively small number of credit auditors, there are some imbalances in the characteristics of auditors assigned to the different scripts. As Appendix Table 1 shows, there is balance in the assignment of the financial literacy profile (experienced and neophytes) with high and low competition (p-value of an F-test that all auditor characteristics included are jointly zero is .42 and .97 respectively), but not in the indebtedness profile (p-value of the F-test that all variables are jointly zero is 0.01). Over-indebted auditors tend to be older women with a regular salary and to be more likely to have an outstanding loan. As a result we include as controls the variables that cause the imbalance, namely gender, age, whether the auditor is self-employed and whether he or she is currently a borrower (Bruhn and McKenzie, 2009). We therefore run the following specification:

$$y_{ij} = \beta_1 HL_i * HI_i + \beta_2 HL_i * LI_i + \beta_3 HD_i + \beta_4 F_i + L_j + X_i + \varepsilon_{ij}. \quad (2)$$

²⁰ Notice that other auditor individual characteristics were not included as controls because with only 4 auditors, some of these characteristics were collinear with some of the treatments assigned (see Footnote 18).

In this specification, the indicator for high interest rate HI_i (low interest rate LI_i) denotes low (high) competition because a credit at lower cost is more attractive. As before, the regression also includes dummies for each type of financial institution (L_j).

6. Empirical Results

Columns 1 and 2 of Table 2A report, respectively, the average waiting time and the interview time or face to face time of savings auditors with the staff. For auditors dressed informally with low experience and a preference for a checking account (dubbed “control” auditors because all treatment dummies take value zero), each visit lasted on average 18.5 minutes, including 10.2 minutes of face to face interaction with the staff. Auditors visiting commercial banks had to wait on average 18.5 minutes while the wait time in the other institutions was approximately 7 minutes. Commercial banks and SOFIPOs had the shortest face to face time (approximately 11.5 minutes), while low income banks and SCAPs had longer interview times (14.5 and 25 minutes, respectively). Experienced auditors reported significantly longer interview times relative to neophyte auditors by 6.3 and 8.3 minutes depending on the interest rate quoted from other institutions. This difference is however not significant suggesting that the extent of competition does not affect how long staff spends with the auditor. We also do not find differences in interview time between auditors seeking an investment account compared to those interested in a checking account. Column 3 reports the number of different savings products offered by the staff. Commercial banks and SOFIPOs offered the least number of products. Similarly, auditors seeking an investment account are offered fewer products, simply because the institutions have less distinct investment products. According to the CONDUSEF dataset, of the 125 savings products, only 35 percent are investment products. Experienced auditors are not provided with more choices.

[TABLE 2A HERE]

We note that the number of observations drops from 112 to 107 because all the auditors that were assigned to visit SOFOMs were turned away empty-handed, suggesting that SOFOMs do comply with the law. In addition, 92 percent of the visits the auditor was offered a product that aligned with his or her preferences (column 4). In sum, experienced auditors spent more time with the staff but were not offered more products.

[TABLE 2B HERE]

Table 2B reports similar results to those of Table 2A for credit audits. Since an observation is now an auditor-branch pair that may involve more than one visit, columns 1 and 2 report the sum of each visit’s length in minutes. For control auditors, now defined as informally dressed, with low experience and low indebtedness, the average wait time was around 6 minutes and the total time in face to face interactions

throughout all the visits was 33.1 minutes. Similar to the savings audits, experienced auditors had more face to face time with the staff, especially for those that mentioned a higher interest rate offer from another institution.²¹ Using non-experimental variation, we find that shoppers with an undergraduate degree have about 10 more minutes of face to face interaction with the staff. Again, commercial banks had more of a wait time and less interview time when compared to the rest of institutions. Column 3 reports the number of visits in each auditor-branch pair. Control auditors had on average 2.2 visits, 0.6 of which were at home or the place of business. None of the treatment conditions impact the number of visits, although auditors in commercial banks had significantly less visits. Auditors with a business, however, had on average 0.46 more visits, perhaps to verify that the business did exist and that the income reported could be generated from its revenues. In column 4 we report the probability that the loan application was rejected by the lender. On average, 70 percent of the loan applications were rejected. Interestingly, auditors with the high indebtedness profile, that is, auditors that requested amounts that brought household indebtedness up to 70 percent of household income were 47 percent more likely to be rejected. This is particularly so for the commercial banks compared to the rest of institutions. Using non-experimental variation, we find that female and educated auditors as well as those with a loan were less likely to be rejected, while auditors with a business were more likely to be rejected. In addition, among auditors that were offered a loan amount, those with the high indebtedness profile were approved amounts significantly smaller than those requested (column 5).²² Commercial banks did provide on average larger loan sizes compared to other institutions. Thus it seems like banks are willing to give larger loans but may have more stringent approval processes. In sum, lenders seem to adjust their approval decisions and loan amounts rationally in response to the risk profile of prospective clients to mitigate their exposure.

In Table 3A and 3B we explore whether the information provided to auditors conforms to the predictions of the Gabaix and Laibson (2006) model reviewed in Section 2.

[TABLE 3A HERE]

Column 1 of Table 3A reports the number of printed materials (generic leaflets or personalized information) that auditors were given by the staff. The average number of materials among control savings auditors was less than one. In fact, only about 67 percent of auditors were given any material and among those who were, the mode was one leaflet. Perhaps more interesting, column 2 confirms Hypothesis 1 in Section 2 which states that financial institutions do not engage in informative marketing. Indeed, the

²¹ It is not clear a priori whether the extent of competition should play a role in the length of the interview because when faced with an auditor that has an alternative offer with a higher interest rate, say, the staff could spend more (or less) time convincing the auditor about the better product offered in the institution.

²² The number of observations drops from 115 to 88 because 27 loan applications were rejected without an amount offered. Among the 88 loan offers, 54 were ultimately rejected. Results from the regression in column 5 using the 34 loans that were approved are similar to those reported, except that experienced auditors with the low interest rate (high competition) script were offered larger loans.

printed materials from the institutions do not provide factual and detailed information to help customers choose among different financial products. An example of one such material for a credit product is shown in Appendix 1. Column 2 of Table 3A reports that printed materials contained one item of information (out of 17 items in total as described above). While experienced auditors received materials with an additional 2 items, especially if they reported an alternative interest rate offer that was inferior, the average level of information that printed materials provide is very low and certainly insufficient to make informed decisions about the suitability and cost of savings products. Columns 1 and 2 of Table 3B echo the results of Table 3A for credit audits. In only 30 percent of the credit audits (22 out of 88) did auditors receive any printed material. While experienced auditors received 2 or 3.4 more items of information (depending on the interest rate mentioned) than neophyte auditors who only received 1.5 items, in neither case the information received is enough to make informed decisions. We note that by law all printed materials must contain the GAT or CAT, as the examples in Appendix 1 show. The formulas for computing the GAT and CAT however do not take into account avoidable fees and commissions which can be relevant when choosing the cheapest product that will depend on its intended usage. In addition, the CAT and GAT are never made salient as they are typically buried in a paragraph with other required disclosures printed in small font.

Columns 3 to 6 in Tables 3A and 3B test Hypothesis 2 and 3 of Section 2 stating that all auditors should be equally informed about the requirements and unavoidable costs to open a savings account or contract a loan and that only experienced auditors should be aware of avoidable costs. Column 3 reports all the information items into one aggregate variable called “Total information”, while columns 4-6 disaggregates the information provided by the staff into the categories discussed in the previous section: legal requirements (column 4), terms of the account (column 5) and fees and commissions (column 6).

According to column 4 in Table 3A, staff provided oral information to control auditors on 7.1 out of 22 items (1.5 legal requirements, 4.6 term items and 1 fee item). Experienced auditors were provided on average 6 more items of information (an increase of 80 percent in the number of items). Inspecting columns 4 to 6 we can see that the bulk of the increase come from fees and commissions which are all avoidable. Indeed, there are no differences among auditors on the legal requirements needed to open an account. Control auditors are provided 1.5 out of the 2 items of information on average. There are also little differences in the information about the terms provided to experienced and neophyte auditors. Neophyte (control) auditors receive 4.6 items of information while experienced auditors receive 1.6 more items of information, an increase of only 13.5 percent (column 5). In contrast, column 6 reports that neophyte auditors only receive information about one fee and commission while experienced auditors receive information on 4.4 fees and commissions, more than a four-fold increase. Table 3A thus confirms Hypothesis 2 and 3 of Section 2 because all auditors receive roughly the same information needed to open

an account but only experienced shoppers learn about the avoidable fees and commissions when they ask for them. We note that auditors seeking investment products were provided less information on fees simply because these products tend to have fewer fees. Also noteworthy is the fact that all institutions tend to report the same amount of information.

[TABLE 3B HERE]

Table 3B echoes the results of Table 3A. Experienced auditors are given 3.2 and 4.1 more items of information depending on the interest rate quoted from a competing institution. This increase in information does not concern legal requirements or terms of the account but rather fees and commissions. Indeed, control auditors are given information on 0.2 fees and commissions while experienced auditors are given information on 2.7 and 2.5 fees and commissions depending on the interest rate quoted. Again, all auditors are provided enough information to be able to apply for the loan but only experienced auditors are provided information about (mostly avoidable) fees and commissions. We also note that commercial banks tend to give less information to all auditors, probably because staff is more likely to reject applications and after the rejection no further information was provided.

[TABLE 4A HERE]

Tables 4A and 4B complement columns 3-6 of Tables 3A and 3B in that they report the percentage of items in each category that are relevant for the products offered. Since experienced auditors asked for certain terms of the product and certain fees and commissions if they were not provided voluntarily by the staff, Tables 4A and 4B include the percentage of the relevant terms of the product and fees and commissions provided voluntarily.²³

Columns 3 and 4 of Table 4A shows that control auditors are provided most of the information needed to open an account (70 percent of the legal requirements and 52.6 percent of the relevant terms of the account) but instead are barely provided information about avoidable fees and commissions (only 12.1 percent). Experienced auditors are given roughly 23 percent more information related to the terms of the account but only because they asked for it, as there is no significant increase in the information provided voluntarily (column 5). They also receive a three-fold increase in information about fees and commissions (column 6) and about a two-fold increase of information provided voluntarily (column 7). These findings are consistent with Hypotheses 2 and 3 of Section 2 but also suggest that staff may adjust the amount of information provided voluntarily based on the perceived ability of the client to absorb it.

[TABLE 4B HERE]

These findings are also echoed in Table 4B where experienced credit auditors receive about twice more information than control auditors (an increase of 30 percent from a base of 29 percent) in total, and

²³ None of the auditors asked for the legal requirements and thus all information provided was voluntary.

most of this information is provided voluntarily. This is true for information about the terms of the product (column 5) and fees and commissions (column 7).

[Table 5A here]

Columns 1 and 2 of Table 5A report the total yield after one year that would accrue in the savings account under the assumption of “no usage” (column 1) and “usage” (column 2). “No usage” refers to an activity level with neither deposits nor withdrawals made for one year. In this case, without inactivity fees then the formula to calculate total yield coincides with the GAT. In column 2 “usage” refers to the activity level where average balances in the account are below the minimum allowed for 2 months. Columns 1 and 2 can be used to test Hypothesis 4 in Section 2, namely that all costumers will be offered similar products. Indeed, control auditors are offered accounts with a small negative total yield and experienced auditors are given roughly the same accounts. As expected, auditors with a preference for investment accounts are offered higher yields, so auditors are offered different products based on their preference but not based on their financial literacy. When usage fees are taken into account, it appears that experienced auditors (especially those that quote a low interest rate) are offered higher yielding accounts.

Columns 3 and 4 report the difference in total yields between the cheapest savings product that meets the needs of the customer that the institution could have offered and the product that was actually offered. We see that auditors are offered more expensive checking accounts by 2.8 percent or 3.2 percent depending on usage. Indeed, staff offered the basic account in only 2 of the 54 visits where a checking account was requested.²⁴

[TABLE 5B HERE]

Table 5B echoes again the findings of Table 5A. All auditors are offered similar products and yet there are large differences between the cheapest product available and that being offered to them. Without usage costs the difference in the total cost of credit is 32.6 percent and 43 percent once usage costs are included.

[TABLE 6 HERE]

The last section of the questionnaire included a set of subjective questions about the auditor’s perceptions of the service provided by the staff. Table 6 reports these perceptions for the non-professional credit auditors.²⁵ In about 30 percent of the visits the control auditors thought that the staff was kind and that the information provided was clear. Interestingly, none of the control auditors would acquire the product. Experienced shoppers provide higher ratings of the staff performance and would acquire the credit

²⁴ In a very different context Mowl and Boudot (2014) implement a similar audit study to ours in India where auditors were trained to actively ask for a mandated savings account. Even with a more proactive auditor profile, most banks refused to market the mandated accounts to eligible customers.

²⁵ Results for the professional savings auditors are available but less relevant since the number of auditors is small and the fact that they are professional suggests that they may be less influenced by the staff.

in 19.4 and 28.6 percent, depending on the interest rate quoted (difference not significant, p-val is 0.35). Auditors quoting a lower interest rate and thus signaling that they had a better offer were more likely to acquire the product, although they were not necessarily offered a better product. Finally, auditors also perceived the staff to be kinder and were more likely to be willing to acquire the product when they dressed formally, despite waiting a longer time to be treated and receiving less information.

7. Conclusions

This study provides evidence of the quality and quantity of information that financial institutions provide to potential customers on their savings and credit products, as well as the ways in which mismatching of product features and low-income consumers' financial activity profiles can lead these consumers to pay higher costs for the financial services they use in their daily lives.

Consistent with the predictions of Gabaix and Laibson (2006) this study finds that consumers who behave in ways that indicate they have little experience with formal financial products are provided enough information to acquire the product but very little information about its costs, especially those that relate to avoidable fees and commissions. In contrast, experienced auditors who were instructed to ask specific questions about the product if the staff did not disclose this information voluntarily end up better informed about avoidable fees and commissions, both because they asked more and because the staff provided more information voluntarily.

The first key finding is that staff adjusts the information provided to the perceived knowledge of the customer, resulting in too little voluntary provision of basic product information to inexperienced customers. Of course, not all terms and conditions should be disclosed because too much information may also be ineffective, but aggregate terms such as the CAT and GAT should be adequately disclosed as required by law. Unfortunately, in every visit the staff failed to correctly explain its meaning even when prompted by experienced auditors. In addition to disclosing the CAT and GAT to enhance comparability across similar products, staff should disclose avoidable fees and commissions (not reflected in the CAT and GAT) because they can significantly impact the total yield and cost of products.

The second key finding is that staff responded to incentives by limiting the offer of basic savings accounts and by rejecting more frequently loan applications from over-indebted auditors or by reducing the loan amounts approved. The analysis of the average returns and fee structures for savings products in Table 1 suggests that traditional checking accounts have a much stronger business case for providers than the mandated basic accounts, which limit potential revenue that can be earned from the savings accounts through both avoidable and unavoidable fees.

The findings point to an evident misalignment of incentives between officials and potential customers, both in terms of suitability of products to consumers' needs, and in willingness and ability of

sales staff to disclose key product information. They also demonstrate how disclosure and transparency policies may be difficult to implement successfully because financial institutions have strong incentives to undo them. Lowenstein, Sunstein and Golman (Forthcoming) argue that disclosure policy implemented successfully may have little effect on consumers but large effects on financial institutions.

This is however not the case in Mexico where financial disclosure policy can be improved. For example, basic guidance could be provided to consumers on the key questions to ask when looking for a credit or savings product. In addition, information could be provided more transparently as tested in a follow-up to this study (Giné, Martinez and Mazer, In process).

This study covers standard consumer credit and savings products that may be expensive to offer, especially to low-income populations. A promising avenue is the take-up of low-cost mobile or online savings accounts, or access to financial products as a byproduct of government-to-person payment programs, as is the case with the “Oportunidades” social payment program in Mexico.

References

- Agarwal S., Driscoll J, Gabaix X, Laibson D. 2013. "Learning in the Credit Card Market", mimeo. Available at <http://dx.doi.org/10.2139/ssrn.1091623>
- Anagol S, Cole S, Sarkar S. 2012. "Understanding the Incentives of Commissions Motivated Agents: Theory and Evidence from the Indian Life Insurance Market." Harvard Business School Finance Working Paper No. 12-055.
- Ausubel LM. 1999. "Adverse selection in the credit card market." mimeo, University of Maryland, College Park.
- Banco de Mexico. 2013. "Reporte sobre las condiciones de competencia en el mercado de emisión de tarjetas de crédito" Mexico City, DF, Mexico.
- Banerjee A, Chattopadhyay R, Duflo E, Keniston D, Singh N. 2012. "Can Institutions be Reformed from Within? Evidence from a Randomized Experiment with the Rajasthan Police", mimeo MIT.
- Bennett D, Yin W. 2013. "The Market for High-Quality Medicine" Unpublished manuscript. University of Chicago.
- Berg T, Puri M, Rocholl J. 2013. "Loan Officer Incentives and the Limits of Hard Information" Available at SSRN: <http://dx.doi.org/10.2139/ssrn.2022972>.
- Bruhn M, McKenzie D. 2009. "In Pursuit of Balance: Randomization in Practice in Development Field Experiments." *American Economic Journal: Applied Economics*, 1(4): 200–232.
- Campbell JY, Jackson H, Madrian BC, Tufano P. 2011. "Consumer Financial Protection." *Journal of Economic Perspectives* 25(1): 91-114
- Chetty R, Looney A, Kroft K. 2009. "Salience and Taxation: Theory and Evidence." *American Economic Review* 99(4):1145-1177.
- Choi J, Laibson D, Madrian BC. 2011. "\$100 bills on the sidewalk: suboptimal investment in 401(k) plans." *Review of Economics and Statistics* 93(3): 748-763
- CONDUSEF. 2012. *2011 Anuario Estadístico*. Mexico City, DF, Mexico.
- Comisión Nacional Bancaria y de Valores. 2011. *Informe de Inclusión Financiera*. Third Volume.
- CGAP. 2006. *Safe and Accesible: Bringing Poor Savers into the Formal Financial System*. Washington, D.C.
- Duarte F, Hastings JS. 2011. "Fettered consumers and sophisticated firms: evidence from Mexico's privatized social security market." mimeo, Brown University.
- Finkelstein A. 2009. "E-ZTAX: Tax salience and tax rates". *Quarterly Journal of Economics* 124(3): 969-1010.
- Gabaix X, Laibson D. 2006. Shrouded attributes, consumer myopia, and information suppression in competitive markets. *Quarterly Journal of Economics* 121(2): 505-540

- Gross DB, Souleles NS. 2002. Do liquidity constraints and interest rates matter for consumer behavior? evidence from credit card data. *Quarterly Journal of Economics* 117(1): 149-185
- Grossman S. 1981. "The Informational Role of Warranties and Private Disclosure About Product Quality." *Journal of Law and Economics* 24(3): 461-483.
- Hastings JS, Hortaçsu A, Syverson C. 2012. *Advertising and competition in privatized social security: the case of Mexico*. Unpublished manuscript, Brown Univ.
- Iyer, R., Schoar, A. 2012, "The Importance of Hold-up in Contracting: Evidence from a Field Experiment". Unpublished manuscript, MIT.
- Jovanovic B. 1982. "Truthful disclosure of information." *Bell Journal of Economics* 13(1): 36-44.
- López Bolaños A. 2012. "El Endeudamiento de los Hogares en México," Boletín Momento Económico. Universidad Autónoma de México.
- Lowenstein G, Sunstein C, Golman R. Forthcoming. "Disclosure: Psychology Changes Everything" *Annual Review of Economics*.
- Lusardi A, Mitchell O. 2006. *Financial literacy and planning: implications for retirement welling*. Pension Research Council.
- Lusardi A, Mitchell O. 2014. "The Economic Importance of Financial Literacy: Theory and Evidence", *Journal of Economic Literature* 52(1): 5-44.
- Milgrom PR. 1981. "Good news and bad news: Representation theorems and applications." *The Bell Journal* 12(2): 380-91.
- Mullainathan S, Nöth M, Schoar A. 2012. "The Market for Financial Advice: An Audit Study." mimeo, MIT.
- Nisbett RE, Ross L. 1980. *Human inference: strategies and shortcomings of social judgment*. Englewood Cliffs, N.J.: Prentice-Hall.
- Scholnick B., Massoud N., Saunders A. 2013. "The Impact of Wealth on Financial Mistakes: Evidence from Credit Card Non-Payment" *Journal of Financial Stability* 9:26-37
- Thaler R, Sunstein C. 2008. *Nudge, Improving Decisions about Health, Wealth, and Happiness*. New Haven: Yale University.
- World Bank. 2008. *Finance For All? Policies and Pitfalls in Expanding Access*. Washington, D.C.

Appendix 1: Sample marketing materials for consumer credit collected during auditor visits

CAT= 267%

¡Festeja con nosotros equipando tu negocio!

EN ESTAS FIESTAS PATRIAS QUEREMOS APOYARTE

Solicita tu crédito y llévate un regalo sorpresa*

9/12 meses

5.71 mensual

Préstamos desde \$4,000.00 pesos.

¡Pregunta por nuestros microcréditos!

Acércate. Somos tu solución.

Les Maria
55 42 42 7746

CAT anual de 267% (tasas nominales efectivas de 1% de interés por mes).

Prestamos para tu negocio, fácil y rápido.

5080 5050 Ciudad de México 01 800 508 0505 Llamada sin costo.

CAT= 107%

GRANDES BENEFICIOS para tu micronegocio establecido

Obtén un préstamo con pagos a tu medida para hacer crecer tu negocio

Préstamos desde \$2000.00 pesos.

5000% ¡no ayudo a regular mi negocio!

EL PRÉSTAMO	PAGO SEMANAL (de lunes a viernes)	PAGO SEMANAL (de viernes a domingo)	PAGO SEMANAL (domingo a viernes)
\$7000	\$866	\$861	\$948
\$8000	\$1,012	\$759	\$627
\$9000	\$1,159	\$850	\$705
\$10,000*	\$1,285	\$944	\$783
\$12,000*	\$1,518	\$1,159	\$940
\$15,000*	\$1,898	\$1,416	\$1,175
\$20,000*	\$2,550	\$1,888	\$1,567
\$25,000*	\$3,165	\$2,360	\$1,958
\$50,000*	\$3,795	\$2,892	\$2,950

4.5%

¡Pregunta por nuestros microcréditos!

Acércate. Somos tu solución.

CAT anual de 107% (tasas nominales efectivas de 1% de interés por mes).

Prestamos para tu negocio, fácil y rápido.

12 meses