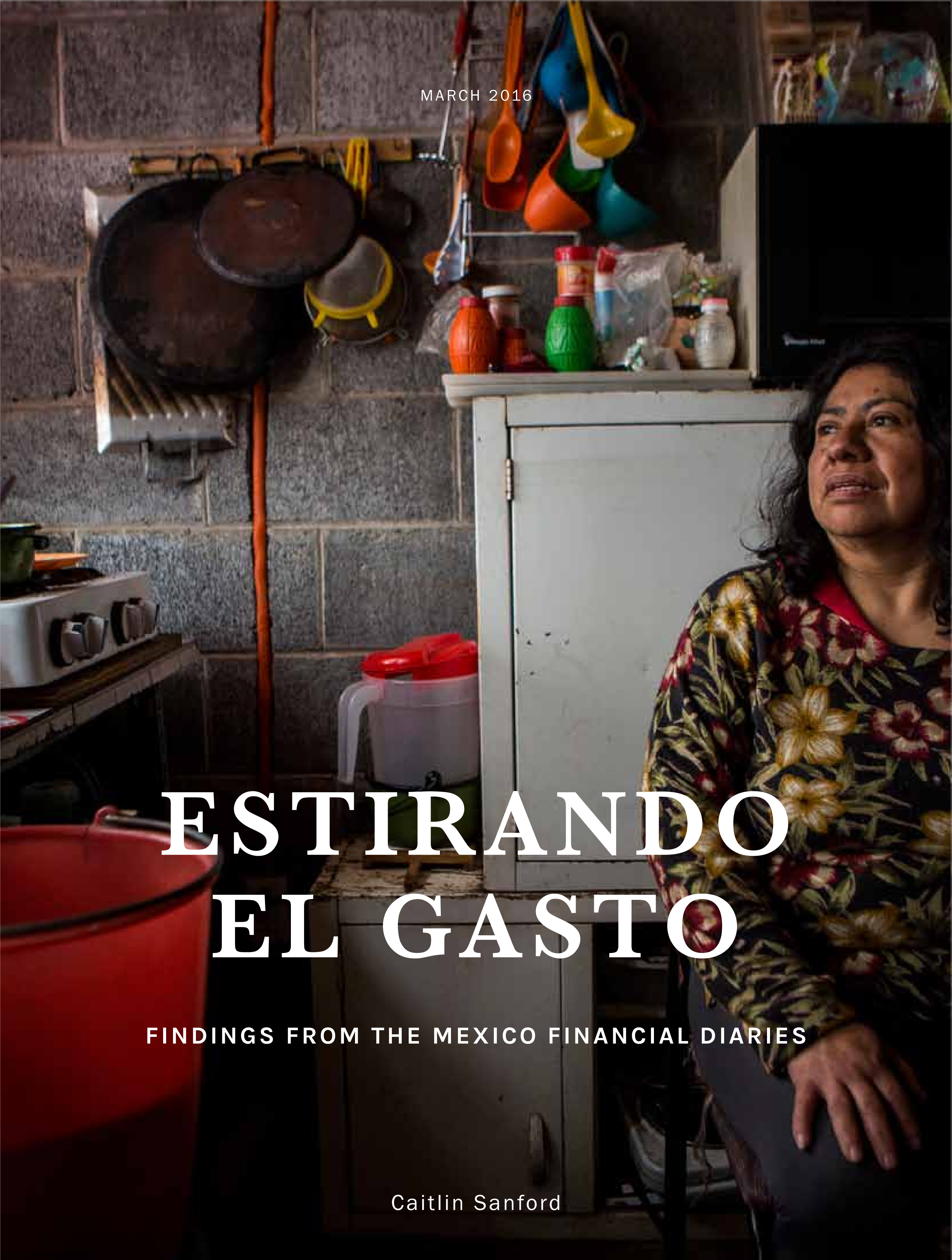


MARCH 2016

ESTIRANDO EL GASTO

FINDINGS FROM THE MEXICO FINANCIAL DIARIES

Caitlin Sanford

BFA Bankable Frontier Associates
Financial Diaries
MetLife Foundation

KEY INSIGHTS FROM THE MEXICO FINANCIAL DIARIES

1

Mexico Financial Diaries households operated on tightly constrained budgets.

Average monthly per capita income was MXN$ 863 (US$ 66). On average, households spent 51 percent of their household budget on food. With only 49 percent of income available to cover all other needs, these households did not have sufficient resources to accomplish all of their objectives, financial or otherwise.

2

Mexico Financial Diaries households earned income from over seven different sources but still struggled to smooth income.

On average, Diaries households experienced 2.4 instances where monthly income dropped below 25 percent of the household monthly average over an eight-month period.

3

Respondents made over 85 percent of all purchases and financial transactions within a distance of thirty minutes walking from home.

A challenge for financial service providers in Mexico is how to allow clients the convenience of transacting close to home at a reasonable cost to financial institutions.

4

Households used seven financial instruments on average during the study and relied more heavily on informal financial mechanisms.

The most commonly used financial instruments included borrowing from family and friends, credit at the store (*fiado*), consumer loans, saving in the house, savings groups (*tandas*), and accounts at banks and cooperatives.

5

Credit allowed families to cover daily expenses, to acquire assets that make their lives better, and to start and run small businesses.

Credit at local shops played an important role, especially in Oaxaca, in allowing families to obtain food in periods when they had little money.

6

Due to a reliance on credit, some families channeled short-term savings to credit repayments.

With households using credit rather than savings to make many purchases, credit payments became the most tangible and imminent savings goal.

7

Some households used informal savings, like savings groups, to help them comply with rigid structures of formal financial products.

Households seemed to require two levels of structure and commitment to keep up with time-bound products like monthly credit and installment repayments.

8

Preparing for emergencies and achieving key aspirations such as building a home, buying land, and financing education were the primary motivations for saving.

Savings groups, accounts at banks and cooperatives, and “investing” in building materials helped households make progress towards these goals.

9

Transactions in saving at home were of a meaningful size, suggesting a potential opportunity.

The median deposit into savings in the house was MXN$ 200 (US$ 15) and the median withdrawal was MXN$ 300 (US$ 23). Diaries respondents also kept important amounts of money on hand—30 percent of monthly per capita income in the average interview—to be spent imminently.

10

Diaries respondents value certainty and predictability.

Adjustments that help households know when income will arrive help make planning easier.

11

At the same time, respondents appreciate and need flexibility in financial products.

Given the unpredictability and the frequency of financial shocks, flexibility in products, like variable credit repayments, would be a better match for low-income households’ financial realities.

Acknowledgements

Bankable Frontier Associates and GESOC A.C. ran the Financial Diaries project with support from National Savings and Financial Services Bank (BANSEFI). We are grateful to the Bill & Melinda Gates Foundation and the World Bank Group for funding that made Financial Diaries data collection possible in Mexico. The publication of this report is supported by a grant from the MetLife Foundation administered by Rockefeller Philanthropy Advisors. Ariadna Molinari translated the Spanish version of this report. All photos in this report are credit to Adriana Zehbrauskas. Most of all, we'd like to thank the respondents who generously and candidly shared their experiences and the details of their financial lives.

INTRODUCTION

MARGINALIZED LIVES, SMALL ECONOMIC MARGINS

"Carla" and "Jacobo"[1] lived in a small house on Jacobo's father's land on the outskirts of Mexico City with their four children, ages five, four, two, and nine months old when we met them. During the Financial Diaries, the family's main sources of income included Jacobo's work in construction (although he did not consistently have work), Carla's periodic work as a housecleaner, and support from Jacobo's parents. When money was tight, or simply when opportunities arose, Jacobo and Carla supplemented their income with odd jobs: Jacobo collected metal from junk yards and trash sites for resale, and Carla offered babysitting services to other women in the community.

The family used financial instruments to attempt to wrangle more control over when cash would be available. To this end, Carla and Jacobo used fourteen financial instruments during the course of the Financial Diaries. Of these fourteen financial tools, installment purchases and school supply benefit cards from a government program were the only formal devices—that is, the only products issued through an institution and not the family's social network.

The longitudinal nature of the Financial Diaries allowed us to accompany Carla and Jacobo's family through successes and setbacks over the course of a year, tracking how financial services facilitated

[1] All names have been changed to protect respondents' anonymity.

resilience or exacerbated hard times. Carla contracted hepatitis, which she then passed on to two of her children. Jacobo was paid late by his construction bosses a number of times. The family borrowed money for a hospital visit and to pay for a cast when their young son broke his foot. Then, Jacobo's uncle was killed at a cock fight that became violent. The family once again had to borrow to contribute to the funeral.

But, more happily, the family also managed to pay MXN$ 300 (US$ 22) per month toward buying their own piece of land. The couple wanted to make their marriage official in a religious ceremony, and they succeeded in baptizing their children at the neighborhood church, a requirement for a religious wedding in their community. They managed to continue to save in an *alcancia*, or piggy bank, to pay for the wedding ceremony. Government anti-hunger assistance came at the right time, and Jacobo was paid with a sheep for one of his jobs in December, allowing the family to have a feast for *Dia de los Reyes*, or Three Kings Day, one of the most significant Christmas celebrations in Mexico.

Like other participants in the Mexico Financial Diaries, Carla and Jacobo lived under tumultuous conditions in which both incomes and expenses are hard to predict. While their social network was helpful in weathering some shocks, the couple also had obligations to support the people close to them. Getting enough money and deciding what to do with was the primary concern for these families. And most formal financial services fell short for Diaries households.

Financial Diaries uses finance as the lens through which to view the kaleidoscope of triumphs and challenges in the lives of low-income Mexicans, and to assess how financial services might be of help. The Mexico Financial Diaries followed 185 families in three locations representing three very different realities of Mexican life. The research sites included a poor neighborhood on the outskirts of Mexico City, a small town in

Puebla state, and a rural Mixteca community in Oaxaca state. About two-thirds of the 185 households in the sample received *Prospera*[2], and the remaining one-third was selected to be a comparison group that did not qualify for Prospera. Our research team visited these households to conduct interviews approximately every two weeks over the course of a year, from early 2014 through January 2015 (eight months of cash flow analysis are included in this report).[3] Please see the Annex for more details about the sample and methodology.

[2] One of Mexico's largest social programs, Prospera is a Mexican Government Program that offers transfers every two months to female guardians of school-aged children who meet poverty requirements and who comply with a number of other requirements related to family health and education. The first iteration of the conditional cash transfer program began in 1997 under the name Progresa. In September 2014 the program was renamed Prospera under the initiative of President Enrique Peña Nieto.

[3] Researchers tracked cash flows from March 2014 through mid-January 2015. However, in this report, we only use data from April to November 2014 in order to use the highest quality data in the analysis. The first and last months (March 2015 and January 2015) do not have complete cash flow information for all households due to differences in when questionnaires started and ended. In December 2015, we were unfortunately unable to capture complete information due to families' engagements during the holidays and unavailability for interviews.

KEY FINDINGS

A. MEXICO FINANCIAL DIARIES HOUSEHOLDS OPERATED ON VERY LOW INCOMES

1. Average monthly per capita income was MXN$ 863 (US$ 66), less than the CONEVAL poverty line for the basic food basket.

Average monthly per capita income for Financial Diaries households was less than the minimum poverty line required to buy basic foodstuffs in Mexico at the time of research. Respondents in the Mexico Financial Diaries had little income to work with. Average per capita monthly income per region ranged from about MXN$ 1,250 pesos (US$ 95) in Mexico City to only MXN$ 320 (US$ 24) per person per month in Oaxaca. At the sample level, 112 of the 185 households (61 percent) fell below the poverty line covering the basic food basket of MXN$ 887 pesos (US$ 67) per person per month set by the National Council for Social Development Evaluation (CONEVAL).[4]

Poverty was especially severe in the Oaxaca research site, which brought down the average for the sample. Figure 2 shows that nearly all of the households in the poorest 25 percent of the sample were located in Oaxaca. In this community, monetary income was supported by consumption from the households' own agricultural production, as well as from an organized system of communal labor known as *La Guesa* (Box 1). Consequently, families were able to eat more than what their monetary incomes alone would allow them to buy.

[4] Basic subsistence poverty lines for urban and rural Mexico are set by the Consejo Nacional de Evaluación de la Politica de Desarrollo Social. http://www.coneval.gob.mx/quienessomos/Paginas/Quienes-Somos.aspx

Figure 1

AVERAGE HOUSEHOLD AND PER CAPITA INCOME BY REGION

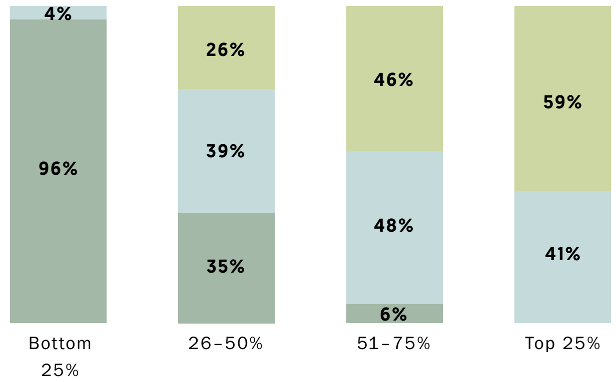


Figure 2

PER CAPITA INCOME IN QUARTILES BY REGION

LEYENDA:
- Mexico City
- Town in Puebla
- Rural Oaxaca

Although financial inclusion messaging often mentions the need for the poor to save, it is useful to remember just how limited resources are for these families. On average, Mexico Financial Diaries households spent 51 percent of the entire household budget on food. This means that just under half of the value of the monthly household income was available for all other expenses, including financial operations like credit, insurance payments, and savings contributions, which are not without cost.

Box 1

Communal labor and *La Guesa* in Oaxaca

Many indigenous cultures in Mexico use systems of traditional labor exchange known as "*Tequio*." The Mixteco community in Oaxaca relied intensively on this practice—which they call *La Guesa*—with households exchanging days of labor as currency. When one person performs a day of labor on another community member's farm, they are then owed a day of labor from this community member's family. Regular group labor is also part of the system: one day of the week is identified for women's labor in the community and another day for men's labor.

The most demanding contribution that the community requires, however, is working in an unpaid position in city administration for a year. In an annual lottery, the indigenous leaders draw names from among all people originally from the community to fill a set of core administrative positions. Those selected are expected to return to the village, no matter where they are, and to work without pay for a year. Members of the community support these unpaid city administrators with in-kind contributions and by offering labor on their farm. But this obligation is nonetheless difficult for households to uphold due to forgone income.

2. The lived experiences of urban and rural poverty in Mexico were vastly different.

The Financial Diaries project illuminates the stark differences between urban and rural poverty in Mexico. We found the consequences of poverty to be markedly different in our urban research site in Mexico City from the small town in Puebla and especially the rural area in Oaxaca. Indeed, comparing BFA's research in other countries with Mexico, we found the consequences of urban poverty to be similar to urban poverty in the US or other developed countries whereas rural poverty mirrored what we have seen in less-developed countries than Mexico, including countries in Africa.

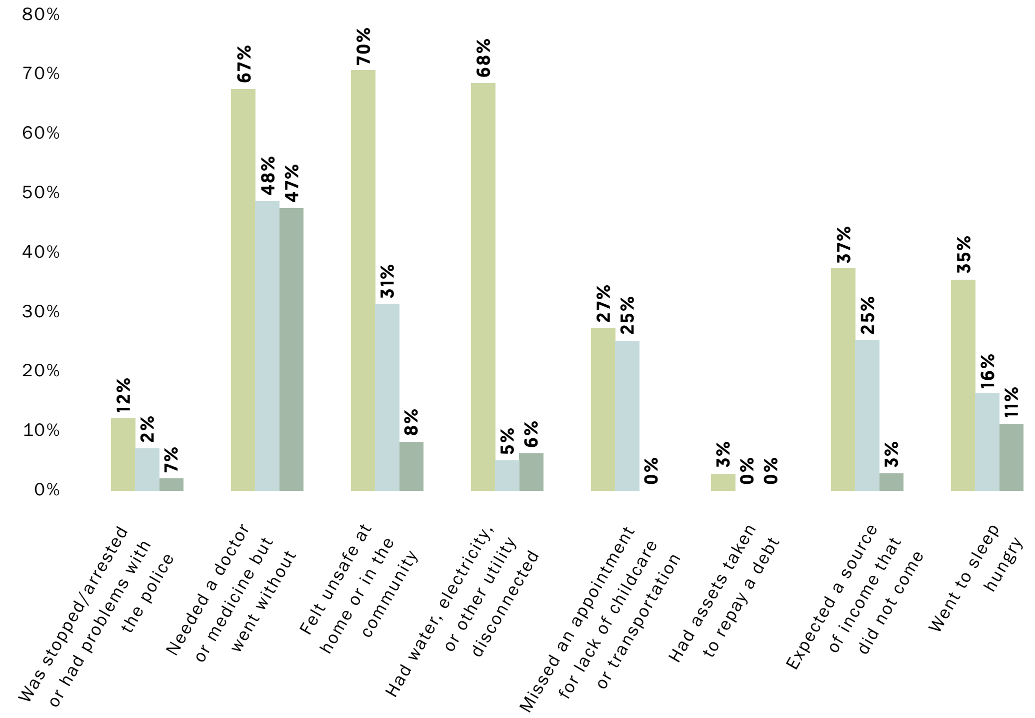
In the research site in rural Oaxaca there is no cell phone coverage, and basic services are lacking. Infrastructure is poor, with the dirt road used to access the community flooded and impassable at various times of the year. "Elena's" family illustrates this hardship:

"*Elena said, 'The past few days have been very difficult for us. We have not had enough money to buy food. We had to pick fruit from the small orchard we have next to the house. I also had to borrow money from my sister to pay for electricity so that we could have some light, as we just had no money.'"*— Researcher's qualitative field notes, Oaxaca

Being in the city with better infrastructure and more job opportunities did not necessarily make life easier. In fact, the percentage of families experiencing hunger was higher in Mexico City (35 percent of households) than in Puebla or Oaxaca, partly because most families in Mexico City cannot grow their own food. The Mexico City site also had the highest proportion of families who went without medical treatment, felt unsafe, and suffered from violence and crime (Figure 3).

Figure 3

PERCENTAGE OF HOUSEHOLDS EXPERIENCING DIFFERENT HARDSHIPS BY REGION



Poor quality services such as unreliable water and sanitation and transportation translated to expenditures for Diaries households. For example, with insecurity and unreliable public transportation in Mexico City, families and especially women reported having to spend more on taxis. When the water was not running in the community for days at a time, families faced unexpected costs of buying bottled water. These costs took away from disposable income that could be used for smoothing consumption and investing in productive activities.

KEY IMPLICATIONS

- *Low-income Mexicans are a diverse group with divergent needs.*
- *Financial service delivery will face very different challenges in different parts of Mexico. Segmentation, even of low-income clients as a group, may be necessary for success.*
- *Improving public services may have a "multiplier effect" of alleviating expenses for low-income families.*

B. HOUSEHOLDS RELIED ON MANY INCOME SOURCES BUT STILL STRUGGLED TO SMOOTH INCOME

Financial Diaries respondents patched together many different sources of income to earn their livelihoods. Diaries households relied on an average of 7.3 different sources of income during the course of the research. Oaxacan Diaries households earned money from five different income sources on average, while in the Mexico City site, where there is substantially more economic activity, the average number of income sources jumped to nine sources per family.

Table 1 shows the percentage of total income that came from different income sources in each location. In Mexico City, just over half of all income earned came from regular employment (a fixed job that is usually full-time). In Oaxaca, 44 percent of all income that Diaries households earned came from Prospera, revealing the importance of the program in sustaining this community. Casual employment, including short-term odd jobs, brought in the most income for the Diaries households in Puebla.

Table 1

PERCENTAGE OF TOTAL INCOME FROM EACH SOURCE BY REGION[5]

	RURAL OAXACA	PUEBLA TOWN	MEXICO CITY	ENTIRE SAMPLE
Regular employment income	6%	26%	53%	38%
Casual income	11%	37%	15%	23%
Prospera	44%	12%	5%	12%
Self-employment	9%	10%	14%	12%
Remittances (including local contributions)	14%	10%	8%	9%
Non-employment income (contributions from charity organizations)	13%	5%	4%	5%
Agricultural income	2%	0%	0%	0%
Rent	1%	0%	0%	0%
Other income	0%	0%	1%	1%
TOTAL INCOME FOR DIARIES HOUSEHOLDS	100%	100%	100%	100%

[5] Calculated as the total percent of income from each source in each area. This is not the proportion of income from each source per family, which varies considerably, but shows the most common ways of earning income by community.

Figure 4

NUMBER OF MONTHS WITH HOUSEHOLD INCOME SPIKING ABOVE AND BELOW 25 PERCENT OF AVERAGE HOUSEHOLD INCOME

NO. OF MONTHS:

With high income
With low income

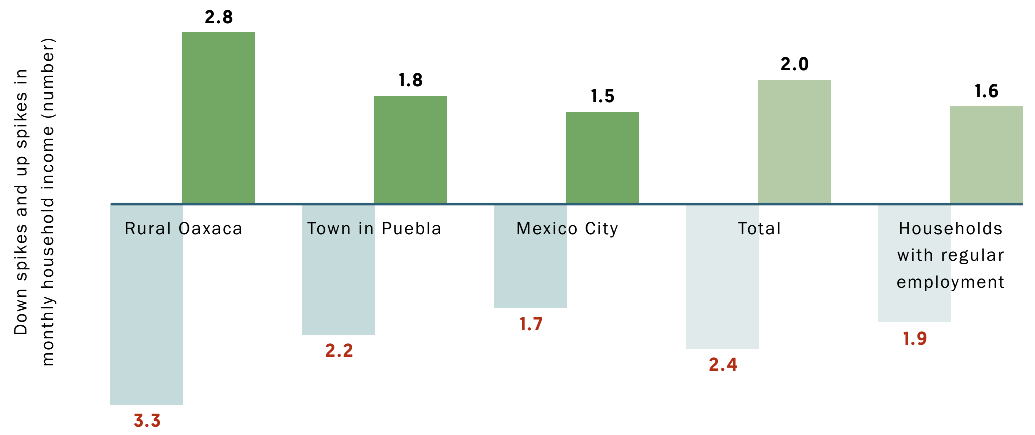
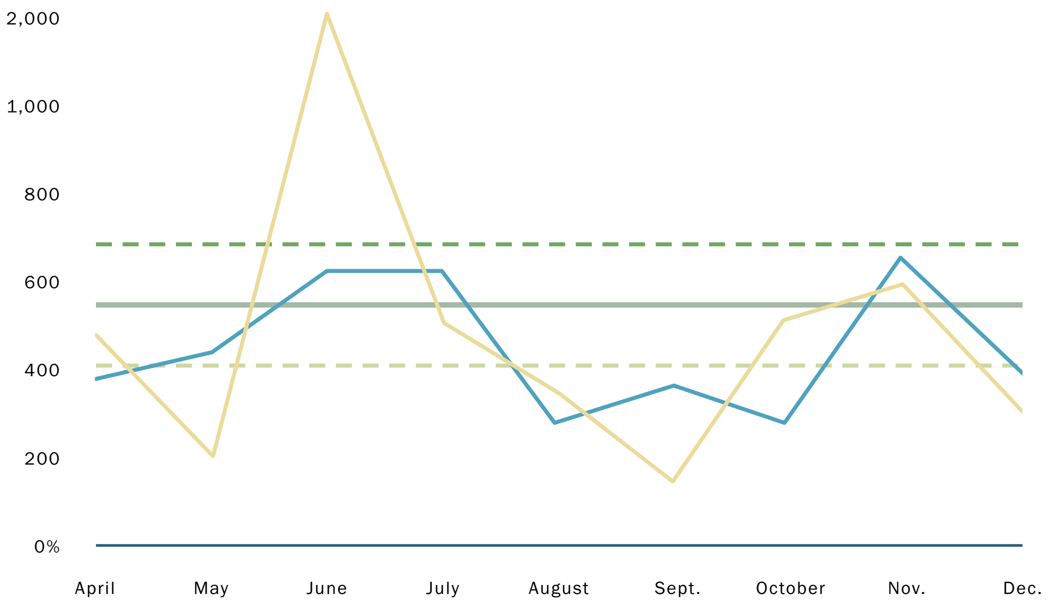


Figure 5

TATIANA AND ALEJANDRO'S MONTHLY HOUSEHOLD INCOME AND EXPENDITURE, COMPARED WITH AVERAGE INCOME

KEY:

Income
Expenses
Average household income
25% above average income
25% below average income



1. Incomes fluctuated significantly month-to-month. Diaries households experienced a number of down spikes in income that made monthly payments difficult.

Monthly household income was highly variable for Diaries households. Over eight months of tracking cash flows, households experienced an average of 2.4 months with "down spikes" in income. We define down spikes as months during which monthly average household income dropped by 25 percent or more of the household's average monthly income. Likewise, we define "up spikes" as months when income increased by 25 percent or more of average monthly income.

Figure 4 shows that these up spikes and down spikes were more common in Oaxaca and Pubela than in Mexico City. This is partly due to the mechanics of calculating monthly income when Prospera is paid every two months, increasing variability in monthly income. Those with at least one source of regular employment in the household experienced fewer down spikes and up spikes than the total sample population.

"Tatiana" and "Alejandro" in Mexico City provide an example of volatile monthly income (Figure 5). Alejandro worked as a security guard, but the number of shifts he was offered varied significantly. June was a boon month for the family: Alejandro received a bonus payment and Tatiana's family sent remittances. However, in August and September Alejandro had fewer shifts and missed work, causing a down spike in income. Then the family had to contribute money when Tatiana's brother was hospitalized in November. Although the family tried to keep expenses consistent, expenses exceeded income in May, July, September, November, and December, and the family had to borrow money to cover their costs.

Diaries respondents expanded and contracted expenses as income fluctuated, to the extent possible. However, it was common for unexpected urgent expenses to come up, including medical costs, housing repairs, unexpected fees or bribes, and theft. As we will see, households largely relied on credit to bridge these gaps.

2. Even when they had regular, fixed employment, respondents struggled with being paid late or not at all.

Income is less volatile for families in which at least one person has a full-time job (Figure 4). But even these relatively more consistent jobs are precarious in the informal sector. Many respondents were not paid on time or were paid less than expected for work performed: 26 percent of the sample as a whole and 36 percent of respondents in Mexico City reported waiting for an important source of income that was not paid to them.

These results are largely driven by respondents with regular employment whose employers do not pay them on time; in fact, 31 percent of households with at least one source of regular employment waited for a payment they were expecting, compared with 11 percent of the total sample. Among those with regular employment, waiting for a salary payment occurred an average of 2.1 times during eight months. A researcher described this problem:

"The head of the household's boss owes him two weeks pay, and he has not paid any of it. The head of household has not gone to complain, because he is afraid that he will be fired, as many of his coworkers have been let go."—Mexico City

In the informal economy, there are few recourse options for workers to insist that they be paid what was agreed. The instability of employment and the lack of employee bargaining power contributes to stress and turmoil in the lives of Mexico Financial Diaries households.

3. Certainty and clear information are important for Financial Diaries households.

Given the volatility in respondent's finances, the promise of guaranteed income through Prospera every two months introduces a welcome aspect of reliability. Understandably, there is some variation in the timing of making millions of Prospera payments in cash in communities throughout Mexico, and we observed this in our study. At the time of research, beneficiaries did not have very much notice as to when payments would be made. This was done with good reason to protect both the women and Prospera staff from theft. We understand that there is a real trade-off between security risks and the value families derive from knowing when their payments are coming. However, we observed that regardless of the type of payment, knowing when and how much money is coming, and actually receiving money when it is expected is an important factor in enabling households to plan to succeed in their financial objectives.

KEY IMPLICATIONS

- *Diaries households experienced a number of down-spikes in income.*
- *Respondents appreciate built-in certainty and clarity in income and payments.*
- *Uncertain and volatile incomes made it difficult for households to make payments, such as utilities and credit payments, on a monthly basis. Allowing flexible payments could alleviate this strain.*
- *Steps to help workers claim the salary they are owed, perhaps by expanding electronic payments and using direct deposit into accounts would help low-wage workers.*

C. DIARIES RESPONDENTS MADE MOST OF THEIR PURCHASES AND FINANCIAL OPERATIONS CLOSE TO HOME

Financial Diaries households made most of their purchases and financial transactions in their neighborhoods. We recorded whether each transaction took place inside the community—defined as within a distance of thirty minutes by foot— or outside of the community. Financial Diaries households made about 90 percent of both the total number and value of all purchases (not including income earned or financial transactions) inside the three research communities within 30 minutes walking distance from home (Figure 6).

We observed that households performed most of their financial transactions inside the community as well (Figure 6, bottom left panel). However, a greater share of the value of financial transactions took place outside of the community (Figure 6, bottom right panel). For high-value transactions, like getting a new loan or making a credit or installment repayment, respondents did travel outside of their communities, perhaps out of necessity.

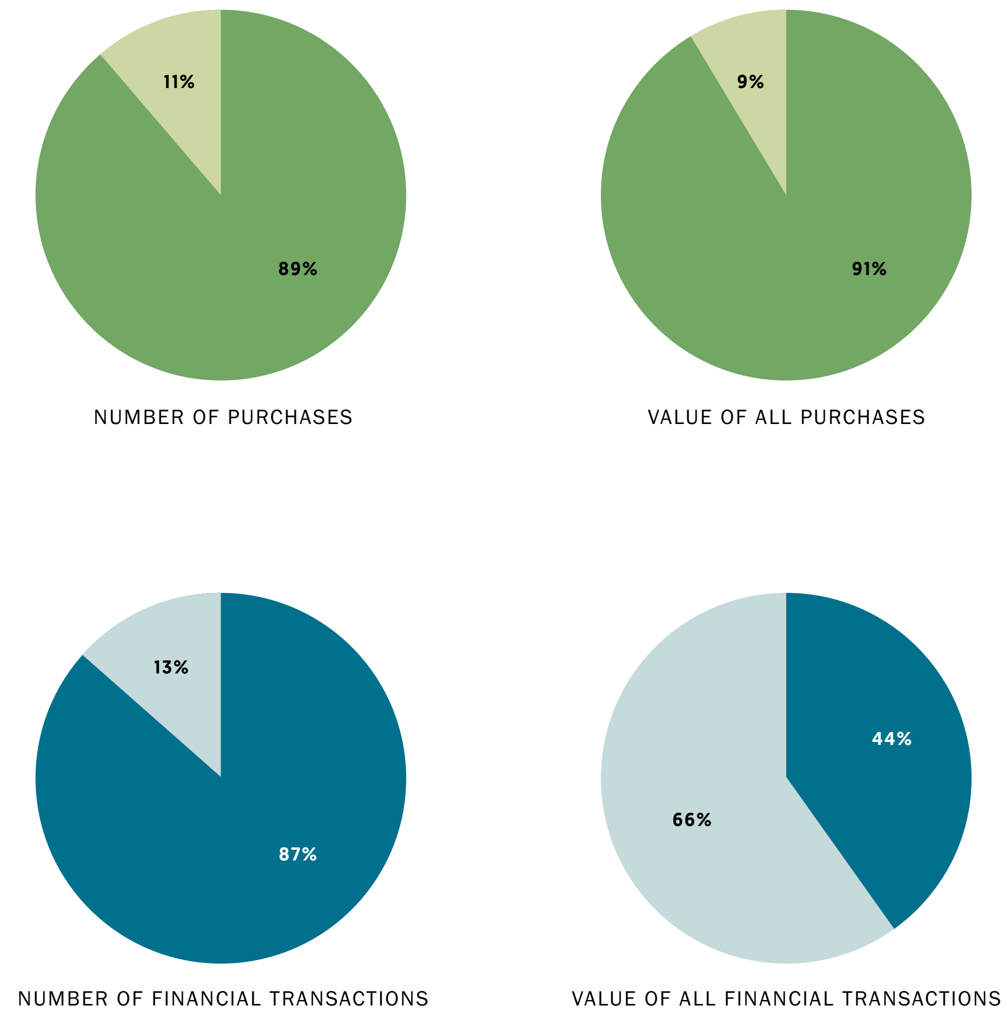


Figure 6

VALUE AND VOLUME OF PURCHASES AND FINANCIAL TRANSACTIONS

KEY:

- Inside the community
- Outside the community
- Inside the community
- Outside the community

KEY IMPLICATIONS

- *Low-income households will travel to carry out larger-value operations.*
- *However, to capture a greater number of transactions and be relevant for clients' daily operations, financial service providers may need to find innovative ways to be present in these communities, for example leveraging technology and partnerships.*

D. MEXICO FINANCIAL DIARIES HOUSEHOLDS USED CREDIT PRODUCTS MORE INTENSIVELY THAN SAVINGS PRODUCTS

We observed that many respondents relied on credit to finance their purchases, achieve bigger goals, and cover unexpected costs. More so than in other countries from which we have Financial Diaries data, Mexico Financial Diaries households rely on credit to finance small and medium-sized purchases.

Figure 7 shows that at the sample level households used on average about four credit instruments and three savings instruments during the course of the research. On both sides of the balance sheet, households use more informal than formal financial tools. These households held only between one and two formal savings and credit instruments with financial institutions, on average.

The sample as a whole made an average of nineteen credit transactions per household compared with fourteen savings transactions over the course of the study. However, on average, households in Mexico City made more savings than credit operations (Figure 8).

Although households made more transactions in credit instruments in Oaxaca and Puebla, the average transaction values in savings instruments, especially withdrawals, was quite high (Figure 9). Note that deposits into savings instruments also includes transactional accounts like bank accounts, driving up the average deposit and withdrawal value in Puebla and Mexico City.[6]

[6] Deposit and withdrawal values in savings instruments may be capturing a "dump and pull" behavior of receiving a salary or Prospera payment and withdrawing the entire payment. In Mexico City, Prospera beneficiaries withdrew their payment at ATMs or other channels, so we counted these inflows as deposits and withdrawals into the BANSEFI account. In Puebla and Oaxaca where households receive money in cash, we did not count Prospera payments as deposits and withdrawals.

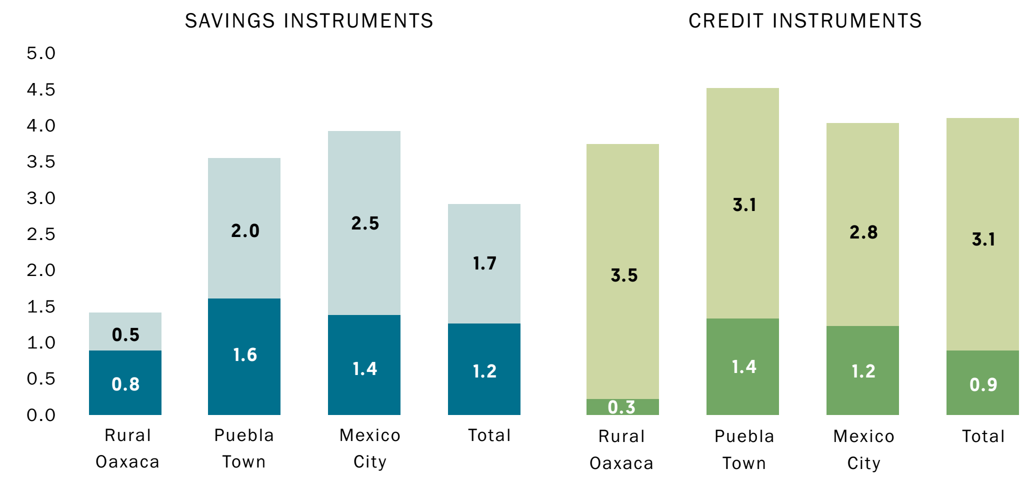


Figure 7

AVERAGE NUMBER OF CREDIT OR SAVINGS INSTRUMENTS USED THROUGHOUT THE STUDY

KEY:
- Informal savings instruments
- Formal savings instruments
- Informal credit instruments
- Formal credit instruments

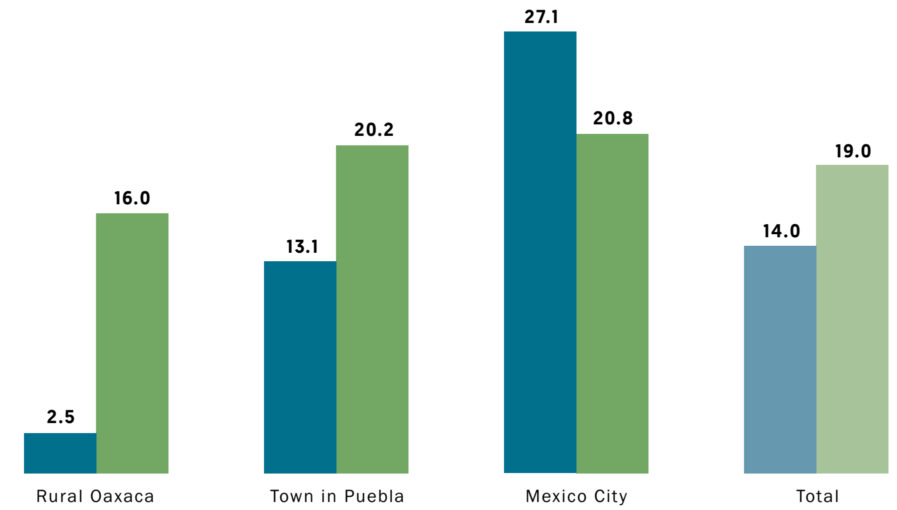


Figure 8

NUMBER OF FINANCIAL TRANSACTIONS PER HOUSEHOLD BY REGION

KEY:
- Average number of savings transactions
- Average number of credit transactions

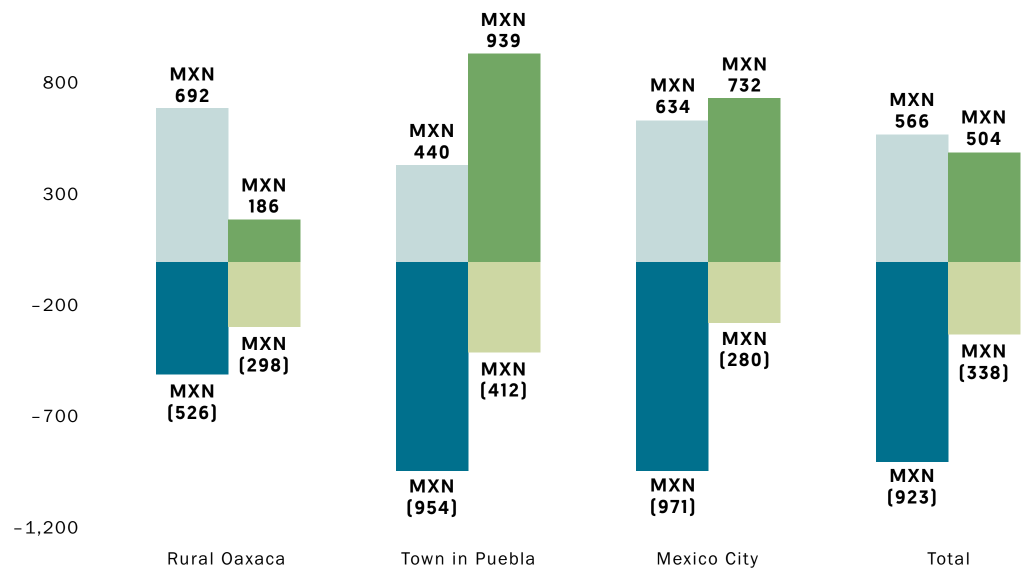


Figure 9

AVERAGE TRANSACTION SIZE IN SAVINGS AND CREDIT INSTRUMENTS PER REGION (MXN$)

KEY:
- Deposits into savings
- Withdrawals from savings
- New borrowing from credit
- Credit repayments

Figure 10

PERCENT OF DIARIES HOUSEHOLDS WITH TYPES OF CREDIT INSTRUMENTS

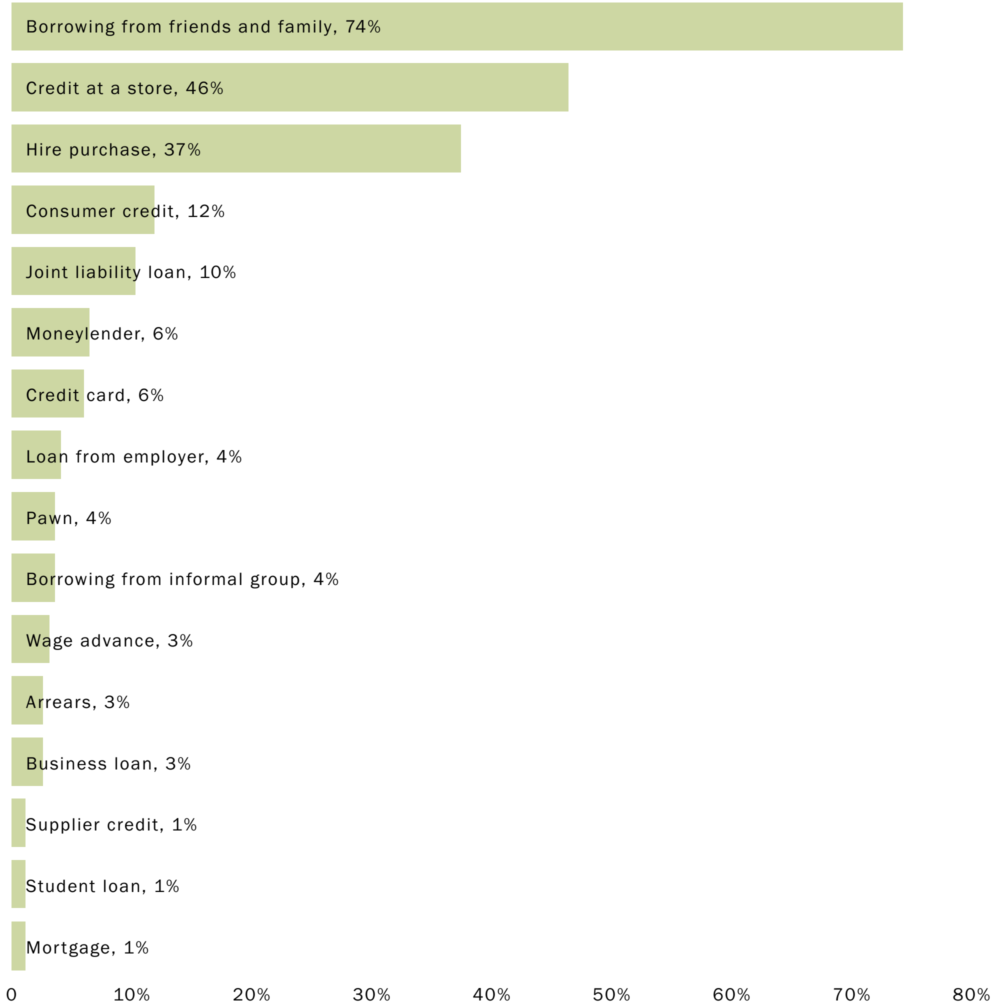
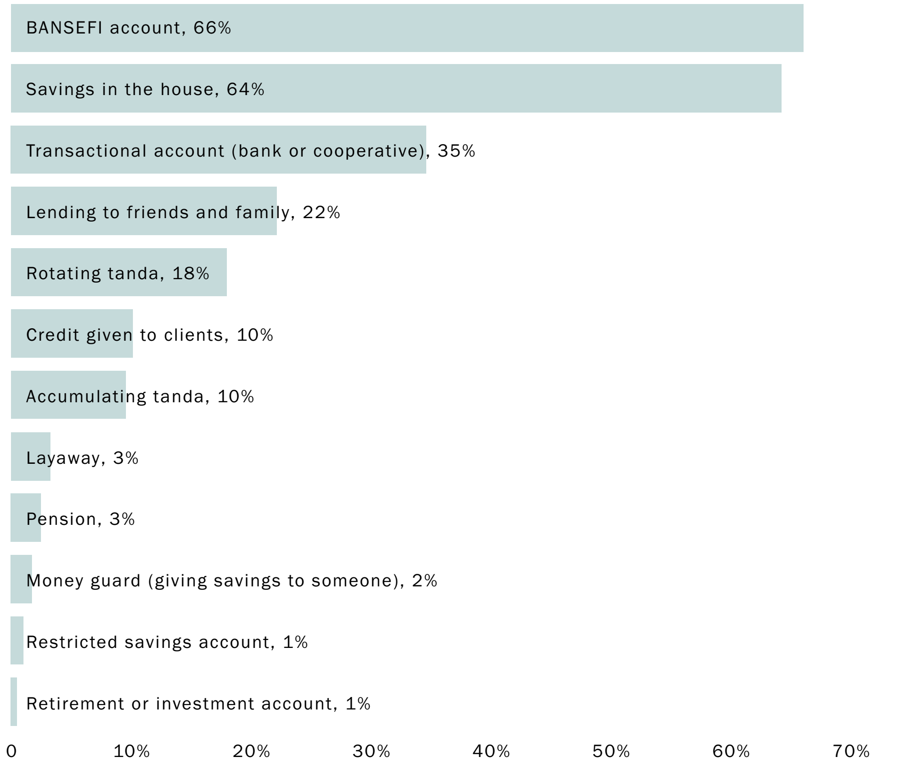


Figure 11

PERCENT OF DIARIES HOUSEHOLDS WITH TYPES OF SAVINGS INSTRUMENTS[10]



[10] An accumulating tanda (also called ASCA) refers to an "Accumulating Savings and Credit Association." This is a type of tanda that does not operate on a rotating basis; rather, group members deposit little by little over the period of the rotating tanda, recouping their savings after a set period such as a year. Although not traditional savings instruments, extending credit to clients and lending to family and friends are important behaviors for maintaining social and financial relationships.

1. Borrowing from family and friends, credit at local shops, installment purchases, savings in the house, and accounts with banks and cooperatives are common financial instruments.

Figure 10 shows that over two-thirds of the sample borrowed from family and friends, and nearly half relied on credit at local shops during the study. Installment purchases and loans for consumption were the most commonly used formal credit instruments.[7]

Consumer loans, loans from savings groups or *tandas*[8], business loans, and microcredit were the highest value loans in the sample on average (Figure 12). Instruments with zero value in new borrowing are due to the fact that households did not take out new credit in these instruments during the eight months of cash flow data included in this report. Credit cards, consumer loans, and student loans have the highest average required repayment values.

Despite the reliance on credit, households do save, primarily at home, in tandas (see footnote 8, Box 2), and in cooperatives or banks (especially in Puebla, captured in the category "transactional account" in Figure 11). As mentioned, two-thirds of the sample received the Prospera benefit that is paid into a BANSEFI account, explaining why 66 percent had this account.[9]

[7] Most installment purchases in the study were from formal institutions such as large retail stores. But some households also paid in installments for goods and services from individuals, such as making monthly payments to a bed-maker in the community.

[8] Savings groups we uncovered included rotating savings and credit associations (ROSCAs) or accumulating savings and credit associations (ASCAs), both called *tandas* in Mexico. In ROSCAs and ASCAs, community members form groups with which they deposit savings. In a ROSCA, each member deposits the same amount at a determined interval, and group members take turns withdrawing the entire pot of money each round. ROSCAs enforce commitment in savings and allow members to obtain larger lump sums more easily than saving alone. In an ASCA the savers make deposits over a given period, but their savings remain with the group organizer. The value of these accumulated savings can be lent out to group members or others who repay with interest. The groups split this interest income between all group members, who also withdraw their own savings at the end of a set savings period.

[9] While Propsera beneficiaries in Mexico City could transact in this account at ATMs and BANSEFI branches in Mexico City, households in Puebla and Oaxaca received their benefit in cash.

Box 2

SAVINGS GROUPS IN THE MEXICO FINANCIAL DIARIES

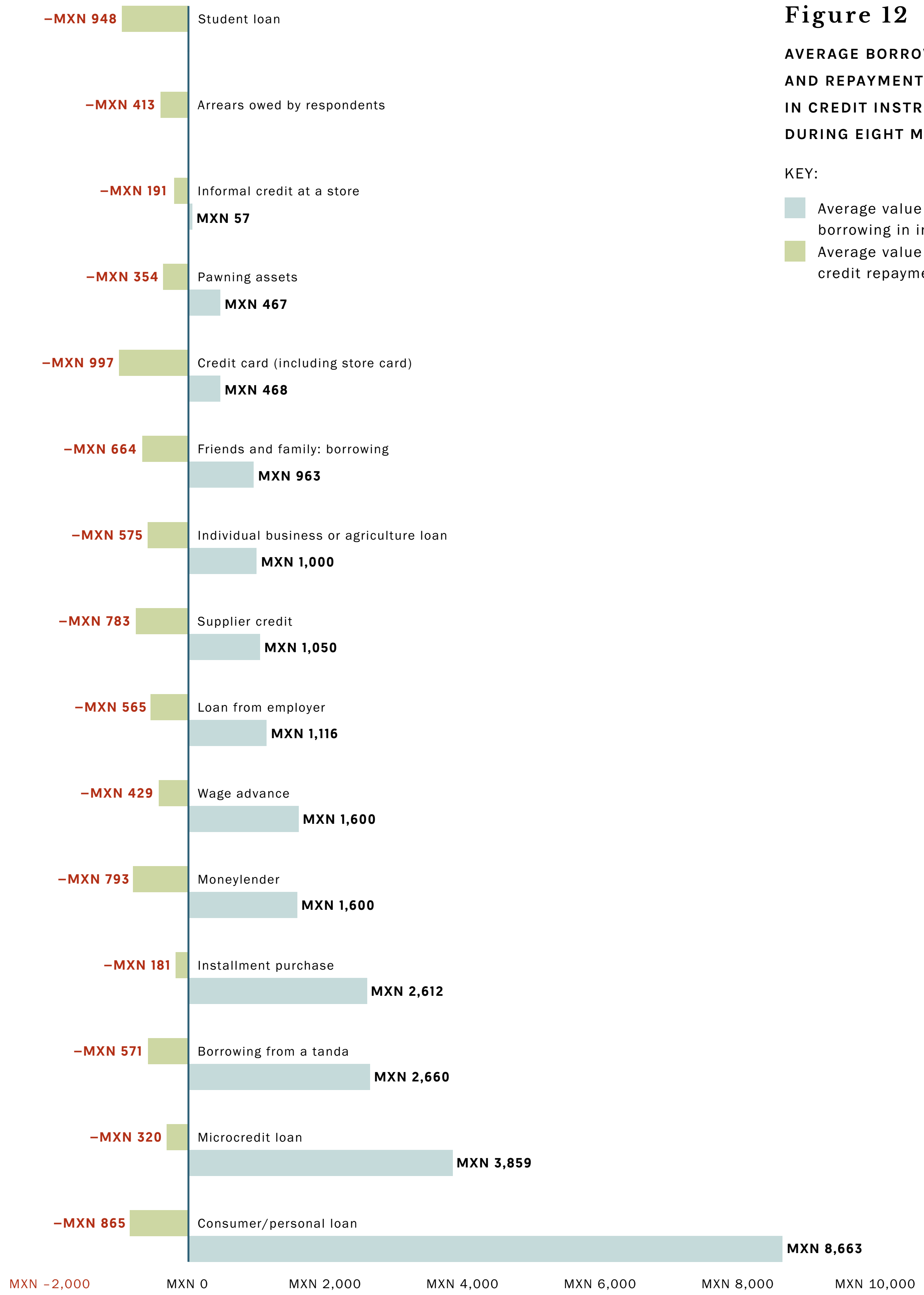
- Those using savings groups, called tandas, used an average of 1.7 of such savings groups per household.
- 98 percent of tandas in the sample met weekly.
- Median contribution was MXN$ 200 (US$ 15).
- Group sizes ranged from three to 20 group members, but about 60 percent of the tandas included 10 or 11 people.
- Median payout was MXN$ 2200 (US$ 167), although the range of payouts spanned from MXN$ 500 to MXN$ 14,000 (US$38 to 1,065).
- Due to the infrequency of income and the particular social structure in Oaxaca, tandas were not a good fit and no household in Oaxaca used them. A few examples show how Diaries households use tandas:

"Mario joined a tanda two weeks ago and he drew the first number [in a lottery]. He used this money to buy shoes for his daughter and to buy a water pipe to make repairs in the house."—Mexico City

"Lucas finished one tanda and started another one with payments of MXN$ 500 (US$ 38). He hasn't been contributing to the household [to his wife] because he is focusing on the tanda and wants to use his payout to fix the house."—Mexico City

Figure 12

AVERAGE BORROWING AND REPAYMENT VALUE IN CREDIT INSTRUMENTS DURING EIGHT MONTHS



KEY:

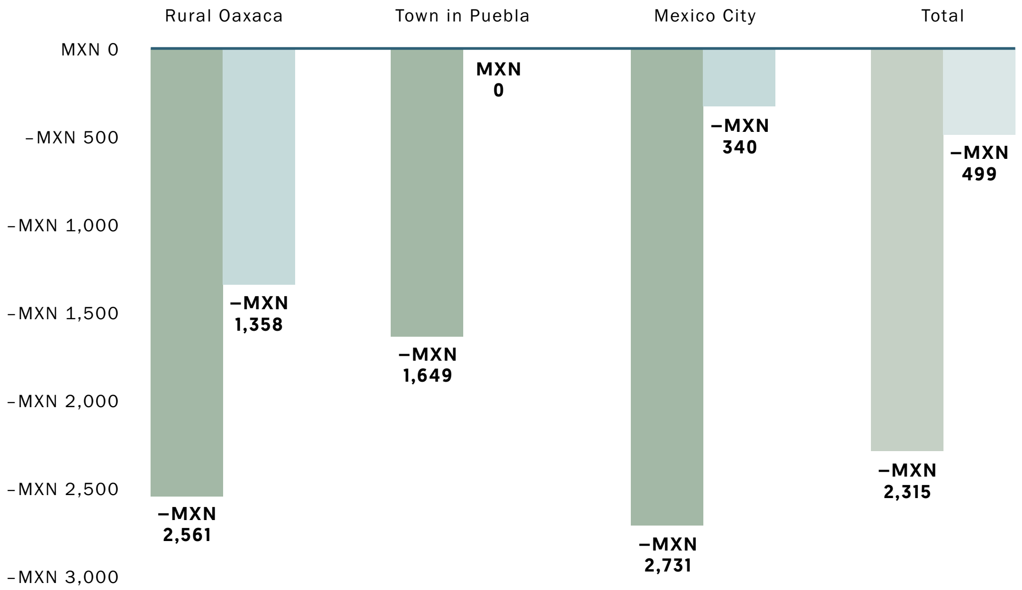
- Average value of new borrowing in instrument
- Average value of credit repayments

Figure 13

DIARIES HOUSEHOLDS' MEDIAN AND MEAN FINANCIAL NET WORTH

KEY:

- Mean
- Median



2. Some households faced high debt burdens.

Reliance on credit left some households in the sample with significant levels of debt (Figure 13). The financial net worth (the difference between their financial assets and liabilities) is negative for most households in the Diaries sample. Note that this measurement of financial net worth does not take into account the value of physical assets that households could sell in an emergency. For some households, storing value in physical assets is an important strategy for which financial net worth does not account. The median net financial worth is close to zero, meaning that most of the Diaries households had some positive savings or enough savings to cover their debts. But other households were highly leveraged, resulting in the negative average financial net worth for the sample as a whole. A researcher noted the cycle of debt that some families find themselves in:

"Clara feels that she never has enough money to get by and that she has to be constantly asking to borrow money."—Oaxaca

The expansion of credit to low-income populations relaxes credit constraints and fills an important need. But reliance on credit comes with challenges. Credit obligations became a problem for Mexico Diaries households when they did not have information about what they committed to, for example, interest rates and compounded fees due to missing payments. Major problems also occurred when households lost jobs, did not receive payments they were counting on, or faced emergencies and had to ration payments.

KEY IMPLICATIONS

- *Credit played an important role in the financial lives of Mexico Financial Diaries respondents.*
- *However, over-indebtedness became a concern when families lost an important source of income and could not keep up with payments.*

E. MEXICO FINANCIAL DIARIES HOUSEHOLDS SAVE FOR REGULAR PAYMENTS, LAND OWNERSHIP, HOME REPAIR OR IMPROVEMENT, AND EMERGENCIES, WHICH HAPPEN FAIRLY OFTEN

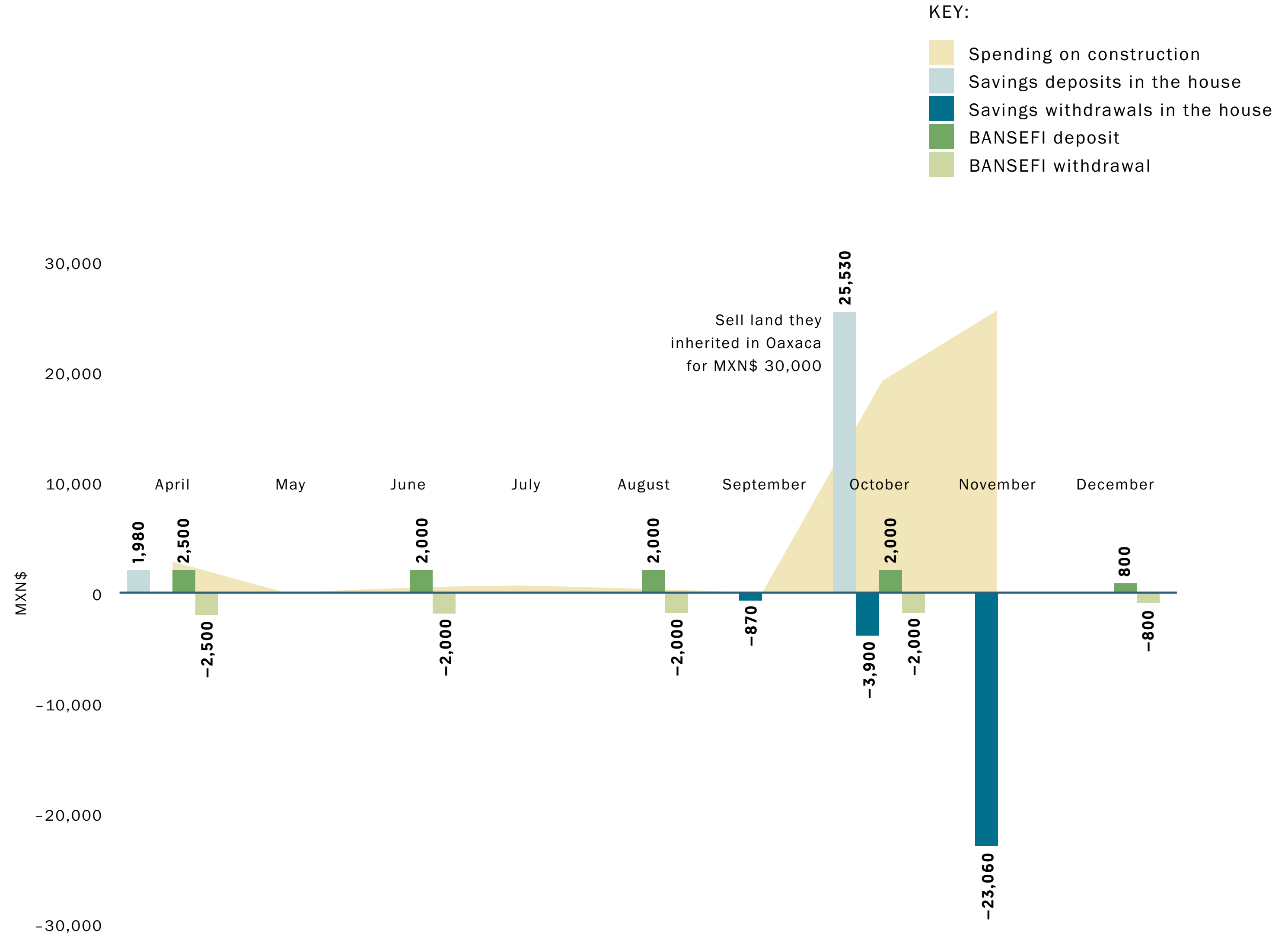
Many Mexican families aspire to have a sturdy house made out of quality materials on land that they own. We heard from young families that buying land and building a house is an important milestone that symbolizes “making it.” In Mexico City, Diaries families hoped to move out of the dangerous community to a safer, more peaceful location. In Puebla, many households owned land but they wanted to improve their homes and to build extra rooms to accommodate extended family. In Oaxaca, Diaries households aspired to have concrete floors and sturdy metal roofs.

“Sara” and “Cesar” provide one such example of directing household finances towards construction (Figure 14). The family lived in a small house that Cesar built in Mexico City. They decided to build a second room and then add a second floor in order to live more comfortably. Since Cesar worked in construction, they calculated that the family could expand their home economically if Cesar did much of the work himself. However, they were sold poor quality cement, and Cesar struggled to have the time and energy to spend significant time expanding their home.

For her part, Sara saved in the house and directed her Prospera payment to buying building materials. Sara had inherited a parcel of land from her family in Oaxaca state. Realizing that they would not finish the second floor without an investment in labor and better quality materials, Sara and Cesar decided to sell this land in early October and to invest the money in construction on their house in the city. The family also used installment purchases to buy furniture for the bigger space.

Figure 14

SARA AND CESAR INVESTMENT IN CONSTRUCTION



In addition to saving for large goals of buying land and a home, families wish to have enough cash available for emergencies or unanticipated expenses. As one woman in Oaxaca explained, "*You need to have enough money available to take your child to the hospital in the middle of the night: taxi, doctor, medicine.*" If such emergencies drive the need for savings, it is easy to see why families prefer having highly accessible savings at home.

Mexico Financial Diaries households try hard to save for emergencies, but emergencies that force these households to dip into their savings happen fairly often. Furthermore, living with incomes that are highly variable and uncertain, Diaries households told us that it is important to have a small amount of savings easily accessible to fill gaps if a payment fails to come or if family members cannot find work:

"*Ignacio has not been able to find work. [The family] needs to save for unplanned expenses, so they take advantage of times when Ignacio has work, and they save from this income.*"—Oaxaca;

"*She has MXN $500 (US$38) saved at home. She says, 'I can't move this money. It is for a true emergency'*"—Mexico City;

"*He had to take out money from his savings to pay for everyday expenses.*"—Mexico City.

Some families also channel savings toward credit payments. Saving for the payment a household needs to make to the abonero (installment purchase collector) who is coming to their house to collect money is very concrete, for example. Because Diaries households are using credit rather than savings to purchase goods, these credit payments become families' most tangible, near-term savings goal. We discuss this more in Key Finding F.

1. Households deposited larger sums in saving in the house, while keeping important values in short-term savings easily available.

When respondents told us about saving at home, the amounts they considered to be savings were significant in Oaxaca and Puebla, with the median deposit being MXN$ 500 (US$ 38) (Figure 15). These are important sums of money, and it could in fact make business sense for financial service providers to capture these transactions currently being made in and out of small jars, boxes, and under mattresses.

Before depositing money in secret savings places at home, respondents kept this money on their person—in wallets, purses, pockets and clothing. At the beginning of each interview, we asked about "cash on hand," or money that the household has available to spend imminently. Respondents kept non-trivial amounts of money on hand to spend shortly (Table 2). The value of cash on hand was large relative to income: in Oaxaca, the value of cash on hand was equivalent to an average of 83 percent of monthly per capita income. We observed a similar behavior of small business owners buying stock soon after collecting profits from their business. Mexico Diaries households maintained a high volatility of money, making purchases and re-investing quickly after earning money.

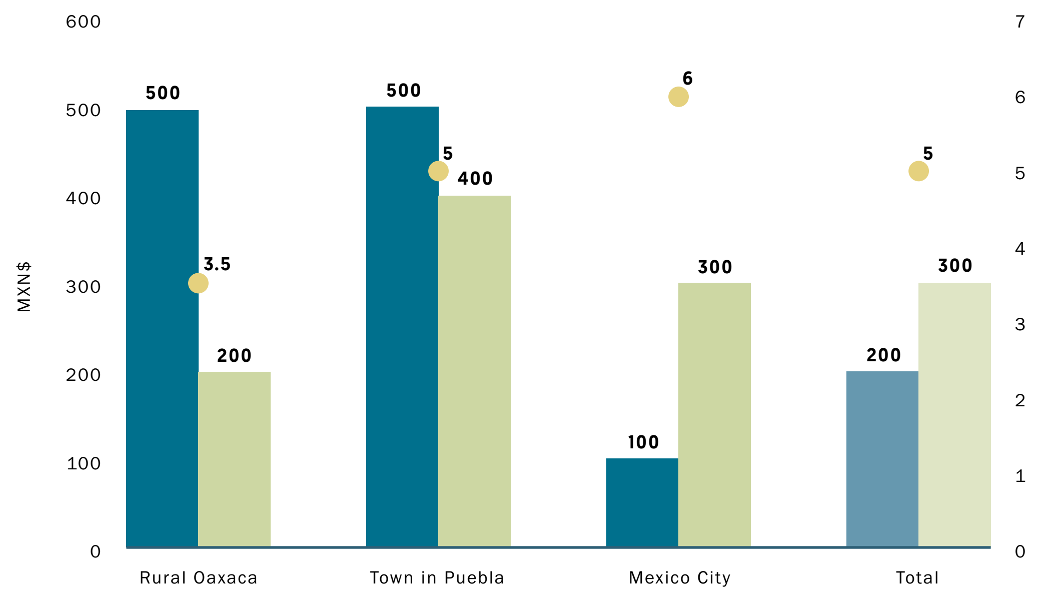


Figure 15

MEDIAN DEPOSIT AND WITHDRAWAL VALUES, SAVINGS IN THE HOUSE

KEY:

- Median deposit
- Median withdrawal
- Median number of transactions

Table 2

BALANCES IN CASH ON HAND TO BE SPENT IN THE SHORT TERM

REGION	AVERAGE CASH ON HAND (MXN$)	MONTHLY AVERAGE PER CAPITA INCOME	CASH ON HAND AS % OF PER CAPITA MONTHLY INCOME
Mexico City	MXN$ 164	MXN$ 1,256	13%
Town in Puebla	MXN$ 299	MXN$ 1,046	28%
Rural Oaxaca	MXN$ 266	MXN$ 320	83%
Total	MXN$ 263	MXN$ 863	30%

However, these families only considered "real" savings to be money in excess of their financial needs. Since Diaries households did not often have extra money left over, they tended not to refer to money that will be spent soon as savings. We noticed that Diaries respondents spoke about this money using terms like, "apartar un poco," "juntar dinero" (put aside a little), and "guardadito" and "alcancías" (types of piggy banks and change jars) rather than "ahorros", or savings. When talking about their businesses and saving for larger assets like a home, a truck, or land, on the other hand, families talked about "investments," a more permanent kind of saving that would have a return for their family. Even though this financial behavior was technically savings without expected monetary return, respondents used the term "investment" to describe longer-term savings.

KEY IMPLICATIONS

- *Values of deposits and withdrawals of saving in the house were of significant value, signaling a potential opportunity.*
- *Households kept important sums of money on hand to be spent in the short term. They valued accessibility of funds.*
- *Branding simply using the term "ahorros" (savings) may not resonate with how families are thinking about putting money aside. Two main motivations are being prepared for emergencies and "investing" in long term asset building.*


F. COMMITMENT BEGETS COMMITMENT: DIARIES USE INFORMAL WORKAROUNDS TO COMPLY WITH FORMAL PRODUCTS

As we have seen, rigid and structured products may not fit naturally with the way Diaries households earn money. Research from behavioral economics shows that commitment devices and structure in financial products help people continue behaviors that they plan out ex-ante, but have trouble sticking to in practice.[11] However, Diaries research suggests that when households with unstable incomes faced structured, rigid monthly repayments, they needed to add in other commitment tools to help them keep up. "Augustina" was one such respondent:

"*Today is Augustina's day to receive her tanda payment. She is waiting for the money to be able to pay a debt.*"—Puebla.

"Mari's" case provides another example of how some households max out with many savings group contributions, forgoing other expenses to keep up with these commitments:

"*'Mari participates in three tandas each for MXN $200 (US$ 15). In one tanda she has two numbers, and the others just one number…In the tanda with two numbers, she drew numbers 9 and 10. Mari says it is very complicated, but this is the only way she can finish paying her debts. They were short in money [in the last two weeks] so the household had to borrow MXN$ 250 (US$ 19) from her brothers.*"—Puebla

[11] See for example, Asraf, Karlan, and Yin. "Tying Odysseus to the Mast: Evidence from a Commitment Savings Product in the Philippines," *The Quarterly Journal of Economics* 121, no. 2 (2006): 635-672.

Informal financial instruments allow "workarounds" in which households relied on a combination of informal tools to accomplish a direct financial objective. Diaries households relied on informal savings instruments in order to comply with the structure of formal credit instruments. For example, "Hernán" in Mexico City used a tanda that paid out every week to make monthly payments on his microcredit loan. Then, he wanted to buy a laptop on installments. In order to make the payments, he borrowed from his employer every month, repaying the boss out of his salary.

The popularity of installment purchases and tandas, both of which enforce discipline, is indiciative of demand for commitment-based financial products among the low-income segment. However, the instability of income made compliance difficult. Because of this, households had to pair multiple tools that offer commitment and structure to keep up.

KEY IMPLICATIONS

- *Households seem to require supplemental informal products, like savings groups, to help them comply with formal products. Formal credit products or structured savings that are not matched to income flows are not likely to replace informal instruments.*
- *In some cases, these workarounds rely on a combination of financial instruments when counting on one device might be more efficient. For example, in the case of buying a computer with a loan from an employer, it might have been better for Hernán to be able to access financing for the computer directly from the seller.*

G. WOMEN'S FINANCES WERE ESPECIALLY INTERTWINED WITH THEIR SOCIAL NETWORKS

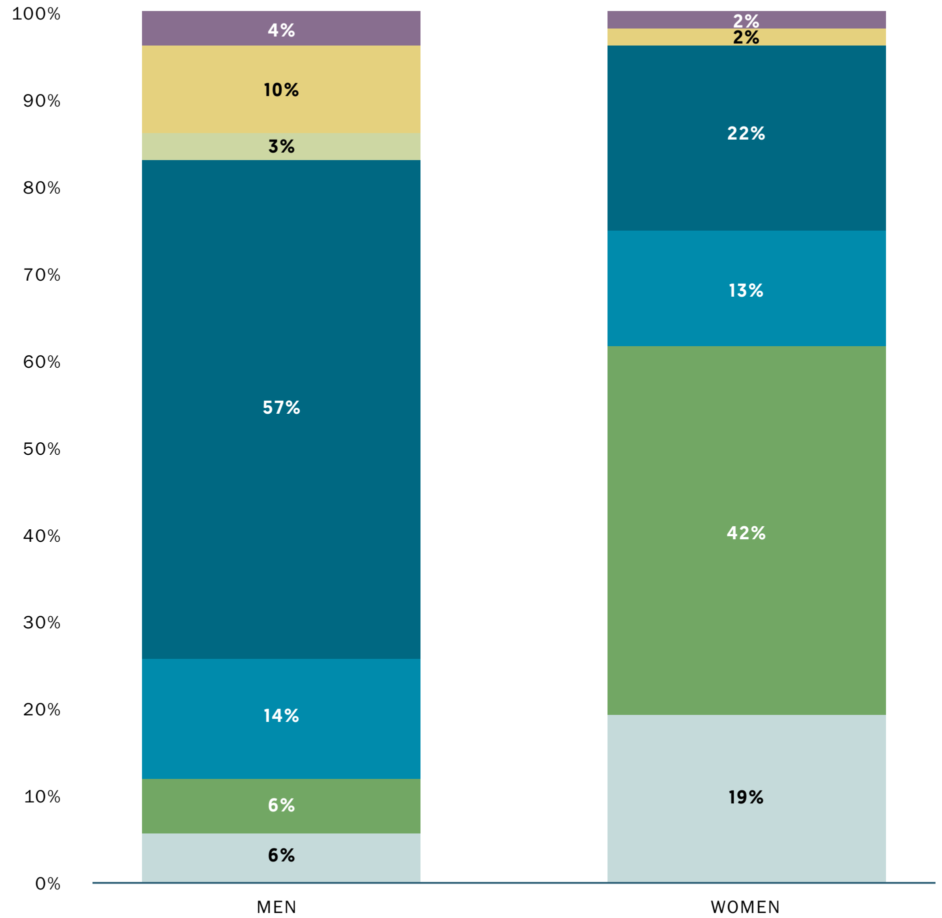
1. An important share of women's incomes come from transfers and remittances.

Figure 16 shows that Prospera and other transfers were the main source of income for 42 percent of women. Remittances were the main source of income for 19 percent of women in the sample. Men, on the other hand, were more likely to rely on regular fixed employment as their main source of income; this was the case for 57 percent of men in the sample. This means that many women are less likely than men to receive income on a regular basis, as income from transfers and remittances tended to be less frequent in the Financial Diaries.

In addition to earning income in different ways, the degree of cooperation between men and women affects how households manage their money. Box 3 highlights the difficult reality for some women who had very little information about their partners' income or spending. Whether or not men and women shared information, respondents of both genders valued achieving their responsibilities through discrete financial tools. Privacy in financial products remains paramount for all users, but can be especially helpful for lower-income women.

Figure 16

MAIN INCOME SOURCE BY GENDER (PERCENT OF INDIVIDUALS WITH THIS SOURCE AS THE MAIN SOURCE OF INCOME)



KEY:

- Other
- Agricultural income
- Casual
- Regular/salaried
- Self-employment
- Remittances
- Prospera and other transfers

Box 3

MACHISMO AND ITS IMPACT ON HOUSEHOLD FINANCIAL BEHAVIOR

The degree of cooperation and information sharing between spouses and family members varied in the Mexico Financial Diaries sample. On the less cooperative end of the spectrum, men gave their wives a weekly allowance for household needs. Women often did not know how much money their husbands made or how they spent the lion's share. While women were expected to manage all household expenses— to obtain money for food, education, clothing, and in some cases small businesses they ran, men faced pressure to find work that would allow the family to build or expand their own home. Women tended to manage the daily financial operations of the household, whereas men were culturally responsible for bigger-ticket items.

Although Financial Diaries households struggled financially, some men in the sample still viewed it as unseemly for their spouses and partners to work. Additional questions on gender, when applied to the sample in Puebla and Mexico City, showed that 20 percent of women reported turning down a work opportunity due to their husband's objections. Of the 138 households surveyed about gender relations, 44 percent also reported that men never help with household work, although 37 percent reported that men help about once a week.

More concerningly, a few women in the sample, especially in Mexico City, were stuck in physically and emotionally abusive relationships. Economic constraints contributed to these women being unable to leave these situations.

2. Women relied on members of their social network as their financial counterparts.

Social networks and personal connections provided the architecture for women's economic opportunities and financial transactions. Facing time-consuming commitments of running the home and taking care of children, many women in the Diaries engaged in "*venta por catálogo*," or selling social marketing products. These sales schemes were sometimes tied to formal companies, or involved simply selling clothes and undergarments. Avon, Tupperware, Mary Kay, and other social marketing companies were popular among women in the sample because the work is flexible and scalable. One respondent, "Rosalía" in Oaxaca, sold coffee and Tupperware door-to-door to supplement her income from Prospera, remittances, and agriculture. To keep her income from these sales out of temptation's way, Rosalía would purposefully sell goods on credit and not collect the payment. That way when she needed money she could claim payment from her customers who owed her money, providing a stash of liquidity for times of need.

Although social marketing sales created extra revenue for some women, respondents told us that the only option was to sell products to family, friends, neighbors, and other mothers and market women—other women they know of a similar stature. Even for women running small food stalls, we observed women struggling to find customers beyond people they knew. Women's businesses that rely on social networks as their key customers enjoy the advantage of leveraging strong community ties for economic advancement. But a disadvantage is that growth opportunities of these businesses may be limited.

KEY IMPLICATIONS

- *There may be additional opportunities for products tied to remittance income and income from transfers like Prospera and contributions from NGOs and religious organizations.*
- *Although activities such as catalog sales offer women important flexibility, women may benefit from resources that help them grow their business from beyond their family, friends, and neighbors.*
- *Social networks and personal connections are strong. Providers may be able to leverage this social architecture to disseminate information and build capability to use new products.*

What can we conclude from

FINANCIAL DIARIES?

TAKEAWAYS FOR POLICYMAKERS

The main implications from the Financial Diaries related to government programs and policies include the following points:

1

Delivery of non-financial services can ease financial burdens.

Poor quality services such as unreliable water, sanitation and transportation translated to expenditures for Diaries households. These costs took away from disposable income that could be used for smoothing consumption and investing in productive activities.

2

Relatedly, lack of connectivity in poor areas, like the Oaxaca research site, limit opportunities for financial inclusion.

With only a dirt road connecting our rural research site to the nearest city that is an hour away, and with no cell phone service in the area, it will be difficult for Diaries respondents in this area to climb out of poverty. Lack of basic infrastructure in the poor and indigenous areas of Mexico stifles progress.

3

Remote areas lack financial service access points, but consumer protection should be preserved while incentivizing new entrants.

In the Puebla town, a caja played an important role as the only provider of formal, deposit insured, savings. In the Oaxaca research site in contrast, community members had lost money when a caja failed and could not return deposits. At the end of the study, a new caja without the backing of any regulatory institution entered the community. Continued regulatory attention to how to promote small players while insuring that deposits are safe will be important.

4

Irregular and incomplete payments by employers in the informal economy compound instability.

Diaries households in urban areas struggled with being paid less than what they were owed or not being paid at all. Without information or access to resources to help them challenge this behavior, households felt powerless.

5

Respondents appreciate building their financial capability when information is concise, practical, and simple.

Respondents would appreciate training and practice for actually withdrawing at an ATM, for example, rather than abstract guidelines. In addition, in designing meetings for trainings or repayments, both public officials and financial service providers should consider that low-income people forgo income and often pay for transportation to attend such events.

TAKEAWAYS FOR FINANCIAL SERVICE PROVIDERS

Insights from the Financial Diaries related to financial service providers include the following points:

1

A one-size-fits-all financial offering for low-income customers is not likely to meet their complex financial needs.

While we recognize that offering products to various sub-segments sustainably will be a challenge, the Diaries identified very different groups within the larger segment of low-income clients.

2

Allow flexibility in transacting and flexible repayment schedules.

Financial Diaries show that incomes are irregular. Even respondents with steady jobs struggled to be paid at regular intervals. Allowing clients to make bigger payments when they have more money and encouraging borrowers to match credit repayments to income flows can increase client welfare.

3

Consider what clients are doing to meet with commitment device features of products.

Market research can help reveal whether commitment is helping clients to reach their goals or if families use add-on systems, like savings groups and additional loans, to comply with financial products that are not well-matched to their income flows.

4

To be relevant in clients' daily lives, providers will need to be present in these communities or to allow remote transactions.

The vast majority of purchases and financial transactions (by number of transactions) take place within thirty minutes by foot from respondents' homes. Financial institutions will be more relevant if they find ways to be present in these communities through partnerships and leveraging communication technology.

5

Savings in the house present a market opportunity.

With a median deposit value of MXN$ 200 (US$ 15) and median withdrawals of MXN$ 300 (US$23), savings in the house represent sizable transactions that could constitute a compelling business case that could benefit both clients and financial institutions.

6

Is there a way to offer solutions for small, frequent, local transactions?

Poor households need access to their money and keep savings for short periods. This is a difficult proposition for financial service providers' business case. But households do seek better options to manage short-term savings.

7

Leverage remittances and transfers.

Women received most of their income from remittances and transfers, presenting an opportunity for add-on products. This could include shared accounts that allow multiple users to make contributions, or products linked to direct payments at institutions like pharmacies and schools.

ANNEX

BACKGROUND & METHODOLOGY

Financial Diaries uses in-depth interviews repeated over time to gain a rich and detailed understanding of the financial behavior and needs of low-income households.

First developed by Daryl Collins and coauthors in the book *Portfolios of the Poor*,[12] Bankable Frontier Associates (BFA) has since used this research methodology to study the financial lives of the poor in South Africa, India, Bangladesh, Kenya, Rwanda, and Mexico as well as studies focusing on smallholder farmers in Mozambique, Tanzania, and Pakistan.[13]

We worked with the National Savings and Financial Services Bank (BANSEFI) and the Ministry of Social Development (SEDESOL)[14] on the Mexico Financial Diaries, and as such, a key population of interest was beneficiaries of the social program Prospera, at the time known as Oportunidades. One of Mexico's largest social programs, Prospera makes bi-monthly payments to low-income women with school-aged children, contingent on families visiting health centers and attending other meetings, and on children not missing school. About two-thirds of the 185 households in the sample received Prospera (Table 3). The other one-third of the sample was intended to be an approximate comparison group of low-income people who fell just above the means-testing cut off for the program, or who did not qualify because they did not have school-aged children. Financial Diaries are not journals that families keep or self-reported

[12] Daryl Collins et al. *Portfolios of the Poor: How the World's Poor Live on $2 a Day.* (Princeton, NJ: Princeton University, 2009), and, in Spanish, Daryl Collins et al. *Las finanzas de los pobres: cómo viven los pobres del mundo con dos dólares al día.* (México, DF: Random House Mondadori, 2011).

[13] See http://financial-diaries.com for more information.

[14] Ministry that oversees the Prospera social program.

Table 3

THREE RESEARCH SITES AND SAMPLE SIZES, MEXICO FINANCIAL DIARIES

	MEXICO CITY	TOWN IN PUEBLA	RURAL OAXACA
Description	A peri-urban neighborhood on the edges of Mexico City, home to over 26,700 inhabitants, and considered one of the poorest neighborhoods in the city. There is a high degree of conflict in the community due to rapid population growth and migration to the area.	A small rural community, home to around 2,500 inhabitants located about a two-hour drive from Puebla city. There are limited economic opportunities in this community, with many households struggling to find consistent work. Quite a few households rely on agriculture to supplement food consumption.	A rural community in the Mixteca region of Oaxaca with about 5,800 inhabitants. This community is governed by autonomous indigenous local norms called *Usos y Costumbres*. There is no cell phone signal in this isolated community. Transportation to the nearest town in unreliable.
Financial services available	There are a few microfinance offices and ATMs within the neighborhood. Slightly further afield, residents have access to large commercial banks and retailers as well as smaller financial service providers.	One cooperative, Caja Popular Mexicana, is the only formal financial services provider in the town. To access other financial services, residents travel using two mini-buses to one of two nearby towns, a journey that takes about 90 minutes.	During the Diaries, there were no financial service providers in the community. Previously, a caja, or cooperative, had operated in the area, but it went out of business, eviscerating community members' savings. Residents take taxis that cost MXN$ 70 (US$ 5.30) each way to travel one hour on a precarious dirt road to access one of three banks in the nearest town.
Total number of households	64	61	60
Households that received Prospera	45 (70%)	39 (64%)	35 (58%)

data of any kind. Rather, researchers visit the families every two weeks to interview them about all financial activity and events in their lives. In these interviews, trained enumerators ask about all income, expenses, and transactions in financial instruments (e.g., saving at home, borrowing from a bank, an installment loan) held by household members, logging information using custom database software applied on tablet computers. Before delving into the details of how much each member spent in the preceding two weeks and on what (i.e., the cash flows interviews), we collect information on household demographics and family history, physical assets, and income sources. The detailed cash flow interviews are guided by this initial information which is used to generate a cash flows interview template unique to each family.

The high-frequency nature of the study and the fact that the researchers must visit families in a relatively close geographic area constrains the sample size to about thirty families per researcher. Additionally, due to the intensive time commitment of the project, participating in an hour-long interview every two weeks, and concerns about attrition, we did not select households randomly. Local SEDESOL staff assisted in assuring respondents that participation in the research would not jeopardize their status as Prospera beneficiaries.[15] The sample size and selection are qualitative, despite the fact that the data at the household level are quantitative in nature, with the Mexico Financial Diaries dataset containing over 220,000 individual cash flow data points.

[15] Participating households received gifts in the form of groceries and money at different times during the research to thank them for their time spent on the study, which was significant. The total amount of gifts, which we gave out at random times so the households did not anticipate them, was close to the equivalent of one month's average household income in the sample. The methodology allowed us to track how households used this extra money.

“

*Although
Paula is experiencing economic difficulties, she stretches the little money she has to cover household expenses.*

”

Graphic design by
PAPER & TYPE