

MARCH 2016

DE FIADO EN FIADO

CREDIT TO BRIDGE EXPENSES
IN MEXICO FINANCIAL DIARIES
HOUSEHOLDS

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KEY INSIGHTS FROM THE MEXICO FINANCIAL DIARIES



1

The experience of poverty is not uniform across Mexico Financial Diaries households.

Although the Mexico Financial Diaries households are very poor, the depth and experience of poverty varied considerably by location and income source.

2

Mexico Financial Diaries do not shy away from credit.

Although Diaries households are poor, credit plays an important role in their financial lives. Informal credit options, such as loans from family or friends or credit from small shops rather than from regulated institutions, are important and sometimes the only options available.

3

Rural Diaries households borrow frequently and in small amounts to bridge expenses.

We observed Diaries households in the rural Oaxaca site, especially women, spending significant time making purchases at multiple market stalls to keep credit options open. Though small (the average amount borrowed was MXN\$ 57 or US \$4 each time), this credit is important given the uncertainty of income timings.

4

Rural Diaries households schedule credit borrowing and payment timings with Prospera payments.

Diaries households in rural Oaxaca tend to borrow between Prospera payments, to bridge expenses while making this income stretch, and pay back promptly when Prospera is received. Because households already dedicate a significant amount of income to debt repayment, tying additional credit to Prospera would likely cause strain for these vulnerable households.

5

Installment credit is an important means for low-income households to purchase higher-value assets which improve their lives.

Paying in periodic installments for items such as furniture, appliances, or electronics, allows households to acquire goods which may have seemed otherwise out of reach. However, transparency can be improved.

6

Specialized credit options for health, education, and even housing can be improved.

Diaries households rely on informal credit options for health and schooling expenses, suggesting that formal instruments for these purposes do not exist or can be improved. Further, given the importance of acquiring sturdy housing for these families, financial service providers might do well to market or design products specifically for this purpose.



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.

The Financial Diaries methodology is unique in its ability to capture minute, fine-grained data on all of the financial transactions for a set of households over a year. Underpinning the exhaustive data are the celebrations, the struggles, the sacrifices and unexpected shocks of real families striving to improve their lives now and to improve the future prospects for their children or family members, while having to make extremely difficult tradeoffs at every step.

Many of us take for granted that financial services—and especially credit, whether credit cards, financing options, mortgages, or otherwise—ensure that, more often than not, we don't have to make these tradeoffs. Instead, credit serves as a bridge, allowing us to move towards opportunities that can sustain or improve our (and our families') wellbeing or by allowing us to, literally, bridge expenses over time.

During the Mexico Financial Diaries study—which was carried out with 185 households in three disparate sites in rural Oaxaca, peri-urban Puebla and Mexico City—we saw several examples of households that were able to use credit as a bridge to opportunities that may have otherwise been out of reach. As one example, “Rosario and Daniel”¹ are respondents based in Mexico City. During the study, they lived in Rosario's mother's home, but they wished to move into a house of their own.

¹ All names have been changed to protect respondent identity.

Rosario received remittances from her eldest son and worked as a nanny for a few months of the study, while Daniel, an engineer by training, worked as a contractor for telecommunications firms. Although formally employed, his income was not paid regularly—the amount and payment timings varied considerably.

To construct the new home, Rosario, who manages the household expenses, had been borrowing from a microfinance institution for several years. During the study, she paid off an existing loan and took another to put towards additional materials. She expressed that “some of Mexico’s financial institutions show little interest in helping low-income people because of the high fees and interest rates they usually charge,” but that the loans she received were enough to invest a little and cover other daily or unexpected expenses.

But stories like Rosario’s were few. We came across many more households that lacked access to appropriate formal credit tools to help them cope with emergencies, pay for education, invest in business expansion, or take advantage of other opportunities that presented themselves along the way. For those with access, options are often prohibitively expensive or too inflexible to match their particular needs. If informal options, such as borrowing from a friend,

did not come through or were unavailable, these households made painful tradeoffs, such as choosing between paying for school fees of a child or paying for a much-needed doctor’s visit. This insights paper outlines how credit might play a supportive role in the financial lives of low-income Mexican households, by providing a much-needed bridge when incomes don’t arrive as expected or when emergencies occur.

While each household deserves its own report, we hope that this paper does an honest job of conveying the credit needs of poor Mexican households and that it can serve as a springboard to new solutions and opportunities to improve the financial resilience of families like Rosario and Daniel’s.





KEY FINDING I

MEXICO FINANCIAL DIARIES HOUSEHOLDS EXPERIENCE LARGE FLUCTUATIONS IN THEIR MONTHLY INCOMES, BUT THEIR EXPERIENCE OF POVERTY IS NOT UNIFORM

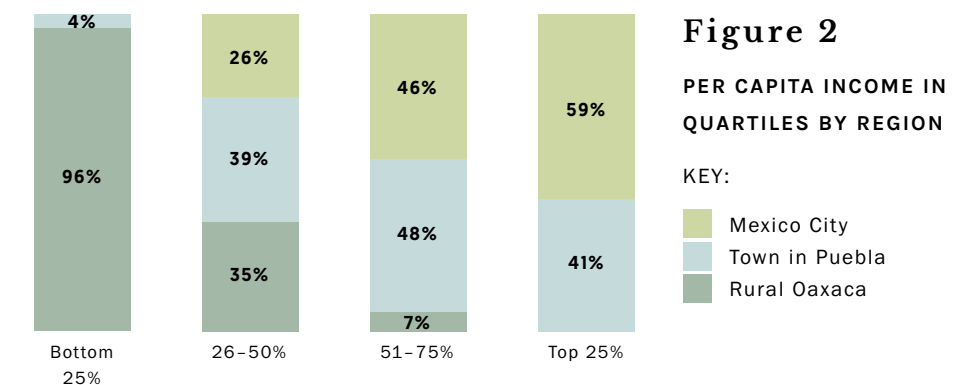
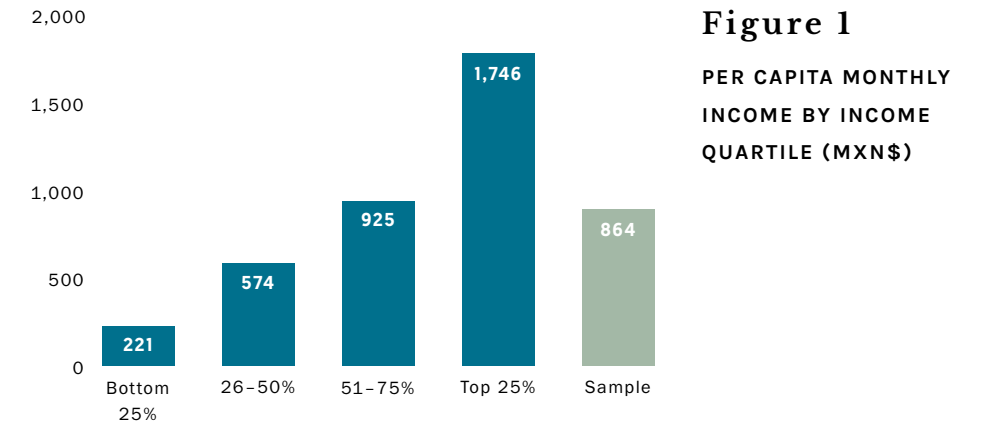
² See Annex for detailed explanation of Mexico Financial Diaries methodology and description of sample.

³ Throughout this paper, we use the average conversion rate from the months of the Mexico Financial Diaries study, which is MXN\$ 13.18 to US\$ 1.

⁴ See Annex for detailed description of research sites.

This paper will explore the implications of poverty on credit decisions. As this paper will describe, the number of income sources and timing of payments play a crucial role in the ability for poor households to cover basic needs, respond to shocks, and invest in opportunities. When incomes and expenses do not match, credit is an important means by which households bridge expense deficits, and, in some cases, credit acts as a bridge to better opportunities. This paper will explore the means by which credit currently plays a role in bridging expenses for Mexico Financial Diaries households² and where a need exists for better-designed credit products which can help low-income Mexican households reach important goals.

Given the original objective of the Mexico Financial Diaries to study the cash flows of Prospera recipient households, the households in the Diaries sample are unequivocally poor—but they are by no means uniformly so. The average net per capita monthly income for the sample was MXN\$ 864 (US\$ 65.55).³ However, income varied considerably across the



sample (Figure 1); the poorest quarter of households earned an average MXN\$ 221 (US\$ 16.76) per capita per month, compared with an average per capita monthly income of MXN\$ 1,746 (US\$ 132.51) for households in the top income quarter, seven times that of the poorest.

Importantly, poverty levels also varied noticeably by region. The Mexico Financial Diaries research was conducted in three diverse sites in Mexico City, Puebla, and rural Oaxaca.⁴



Nearly all households in the bottom income quartile are in Oaxaca (Figure 2). This is a community in which many households rely on agriculture and could be considered subsistence farmers. Many of these households rely on Prospera benefits as their main source of income (Figure 3). Households in Mexico City and Puebla, however, earn a combination of regular (wage) employment and self-employment income. While most of these households also receive Prospera benefits, this is not the primary source of income.

⁵ 70% of sample households in Oaxaca, 64 percent in Puebla, and 58 percent in Mexico City were Prospera recipients during the study.

⁶ 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 3 refers to the primary income sources per region, but these are by no means the only income sources for these households. Mexico Financial Diaries households, like Diaries respondents we have researched in other countries, patch together multiple, diverse income sources. On average, the households in this sample relied on 7.3 different sources of income during the course of the research, from an average of five in Oaxaca to just over eight in Mexico City.

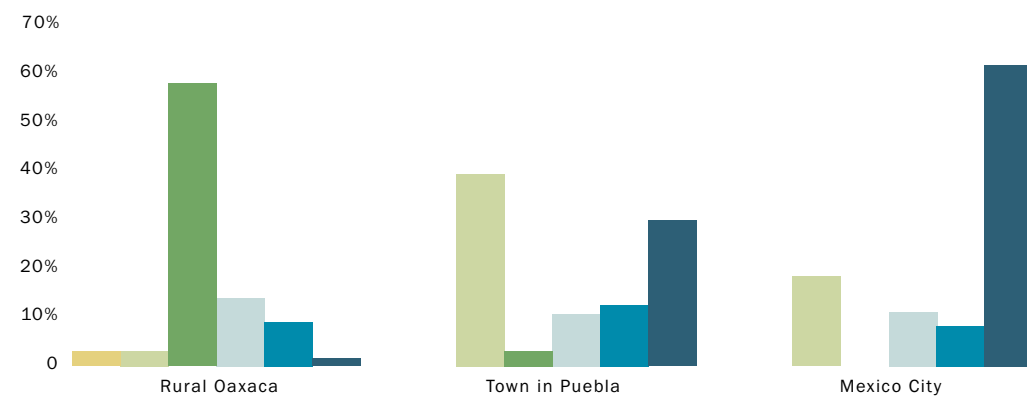
However, the types of income sources to which households have access matter. Although a similar proportion of households in each research location are Prospera recipients,⁵ the proportion of total income that Prospera contributes varies according to other income sources available. For households with regular jobs, salaries contribute the bulk of income (as shown in Table 1 above). For example, in Mexico City, regular employment contributes about 53 percent while Prospera payments account for only 5 percent of total income. In Oaxaca, this trend is reversed, and in Puebla, households patched together a combination of regular and casual income sources.

Figure 3

PRIMARY INCOME SOURCE OF HOUSEHOLDS BY REGION

KEY:

- Agriculture
- Casual Employment
- Prospera
- Remittances
- Self-Employment
- Regular Employment



	RURAL OAXACA	TOWN IN PUEBLA	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%
TOTAL INCOME FOR DIARIES HOUSEHOLDS	100%	100%	100%	100%

Table 1
PERCENTAGE OF HOUSEHOLD INCOME FROM EACH SOURCE BY REGION⁶

KEY IMPLICATIONS

While Mexico Financial Diaries sample households are poor, they are not uniformly so. When designing products for low-income clients, financial service providers (FSPs) should carefully consider the specific low-income segments they wish to reach. Poor households have a diversity of income sources, and urban households have a dramatically different reality than rural households. FSPs must segment and design products that meet clients' unique needs, as we will discuss further in the note.



KEY FINDING II

DESPITE THEIR LOW INCOMES, MEXICO FINANCIAL DIARIES HOUSEHOLDS ACTIVELY USE INFORMAL AND FORMAL CREDIT OPTIONS



Although poor, Mexico Financial Diaries households do not shy away from financial services. These households use financial instruments intensively, juggling an average of seven financial (savings or credit) instruments over the course of the study. Credit features largely in the lives of these households, more so than savings, for the majority of the sample (Figure 4).

Diaries households rely on a number of formal and informal⁷ credit instruments, with informal credit options dominating the portfolios of most households in terms of

borrowing frequency (Figure 5).

And just as household income is not homogenous, nor is use of credit, which varies by region. Households in Oaxaca have fewer credit options than households in Puebla and Mexico City (Table 2), where at least one formal financial option (Puebla) or many (Mexico City) exist. The Oaxaca community is extremely isolated, and there is no cell phone signal. The majority of Diaries households in this community rely only on informal credit options such as credit from small shops, from moneylenders, or from family and friends.

⁷ By formal products, we refer to any intermediation of funds by regulated or licensed institutions, including cooperatives, cajas, microfinance providers, and other small, licensed financial service providers in addition to banks. Informal products include exchanges in which money moves between people and unregulated social groups without the involvement of a licensed or regulated financial institution, such as most savings groups (called *tandas* in Mexico), moneylenders, friends and family, or credit from shopkeepers.

Figure 4

AVERAGE NUMBER OF CREDIT OR SAVINGS INSTRUMENTS USED BY RESPONDENTS THROUGHOUT THE STUDY

KEY:

- Informal credit
- Formal credit
- Informal savings
- Formal savings

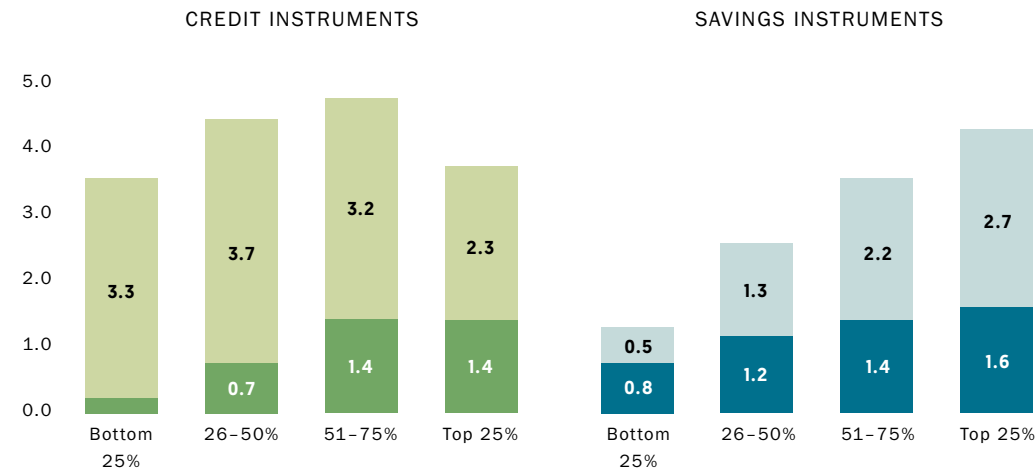


Figure 5

FREQUENCY OF USE AND AVERAGE VALUES FOR MOST-FREQUENTLY-USED CREDIT INSTRUMENTS, MXN\$

KEY:

- Informal credit
- Formal credit

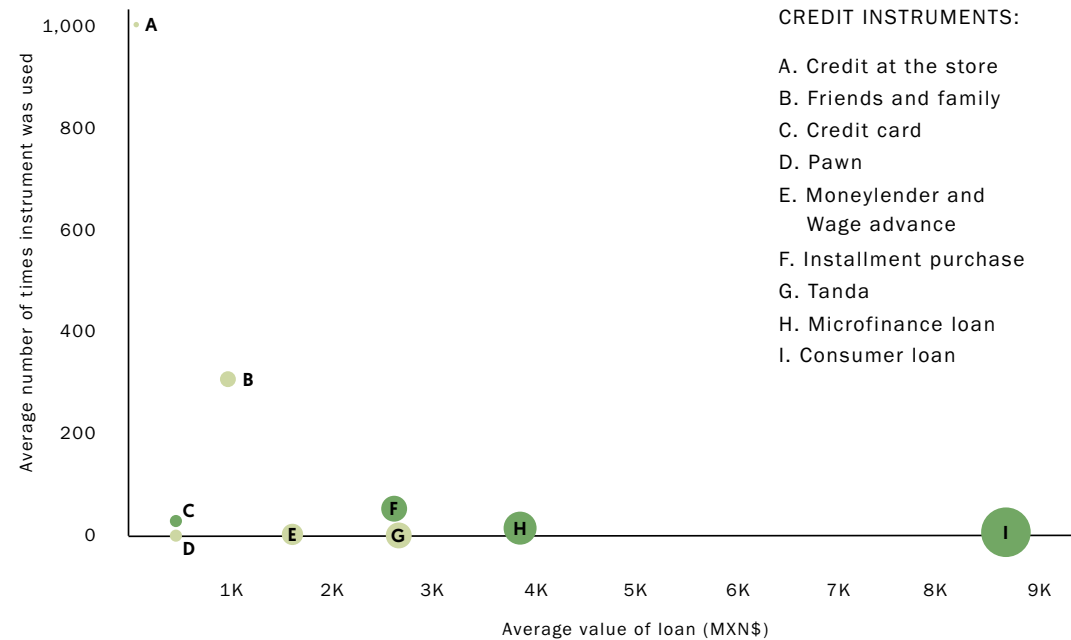


Table 2

PERCENT OF HOUSEHOLDS THAT USED EACH TYPE OF CREDIT INSTRUMENT DURING THE COURSE OF THE STUDY



	Credit at the store	Credit from friends	Installment purchase	Credit card	Consumer loan	Microfinance loan	Moneylender	Employer loan
RURAL OAXACA	89%	77%	11%	5%	0%	0%	6%	0%
TOWN IN PUEBLA	25%	79%	44%	3%	34%	10%	8%	2%
MEXICO CITY	22%	65%	58%	10%	2%	22%	5%	12%

While households in Oaxaca are located far from formal financial access points, 84 percent of households in Puebla have accounts with a local cooperative, in this case Caja Popular Mexicana,⁸ or borrow from large retail shops such as Elektra or Coppel (grouped into the consumer loan and installment purchase category in Table 2).⁹ This community is peri-urban, and Caja Popular Mexicana is the only formal financial institution located in the community. To visit retail stores, households have to travel over an hour. Still, Table 2 suggests that even the presence of a few formal financial options can change access dramatically.

Although the research site in Mexico City is one of the poorest areas of the city, these households have more financial options, but the costs of borrowing can be high.

Figure 5 and Table 2 emphasize the point that most Diaries households rely on informal credit products and that they use these products frequently (nearly 1,000 small loans were taken from informal shops during the eight months of the study, followed by 300 loans from family or friends). These loan sizes can be small—for example, the average loan from an informal shop was MXN\$ 57 (US\$ 4.42)—but they serve an important bridging role.

⁸ Caja Popular Mexicana is the largest cooperative bank in Mexico.

⁹ Grupo Elektra is one of Mexico's leading retail corporations, with both retail and financial divisions. Grupo Elektra offers in-store credit to consumers and offers financial services via Banco Azteca which is housed under its financial division. Similarly, Coppel is one of the largest distributors of retail goods in Mexico and is partnered with BanCoppel.

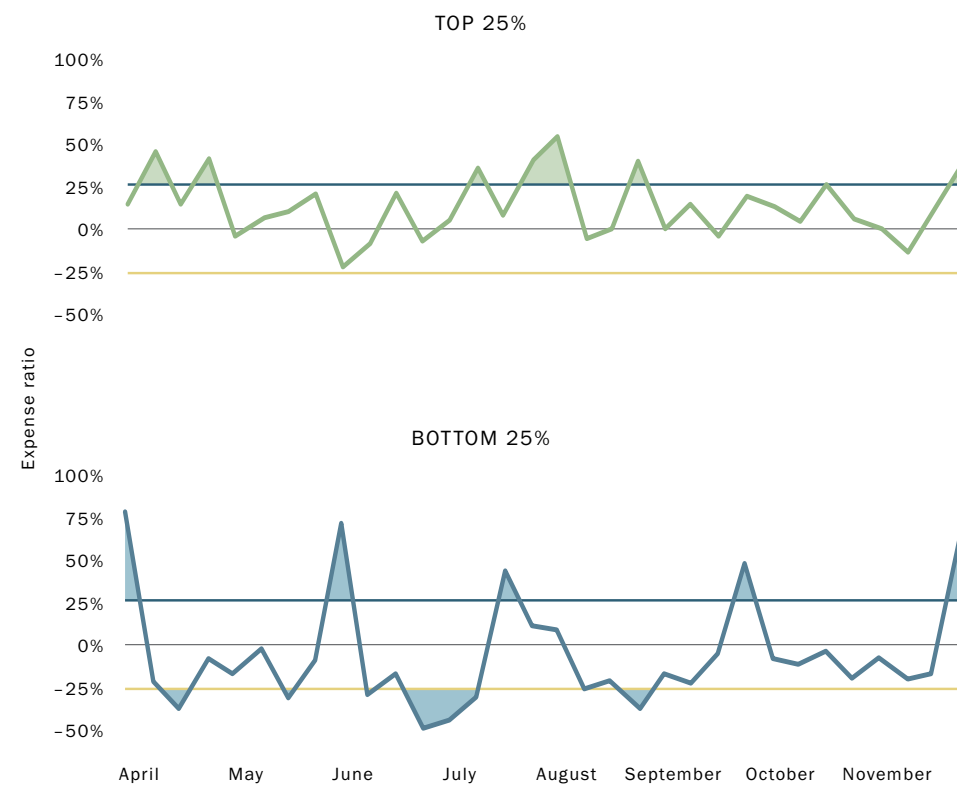


Figure 6

**WEEKLY HOUSEHOLD
EXPENSE DEFICIT OR
SURPLUS FOR THE
TOP AND BOTTOM
INCOME QUANTILES**

KEY:

— Expense surplus
— Expense deficit



Since low-income Mexican households are constantly patching together multiple income sources—many of which can be unpredictable in their timing and amounts (see “Estirando el Gasto: Findings from the Mexico Financial Diaries” for more detail)—these households often use credit as an expense bridge. For example, credit is used to bridge expense deficits—times when household expenses exceed average monthly expenses by 25 percent (Figure 6). In the rest of this paper, we will see how households use credit as an expense bridge for distinct purposes.

Formal credit providers wishing to attract low-income segments must acknowledge that they will be competing with entrenched credit markets and identify ways to provide additional value over the benefits that informal credit often provides such as proximity, flexibility, and the ability to extend small loan sizes relatively often.



KEY IMPLICATIONS

Despite poverty, credit plays a central role in the financial lives of the Mexico Financial Diaries households. FSPs wishing to downscale to the low-income market must recognize that they are competing with existing credit solutions which offer many benefits to low-income households, such as small amounts of credit which can be accessed relatively quickly and repaid flexibly. However, these solutions have many areas for improvement, which formal providers can exploit. The rest of the paper will discuss some of these areas for improvement.

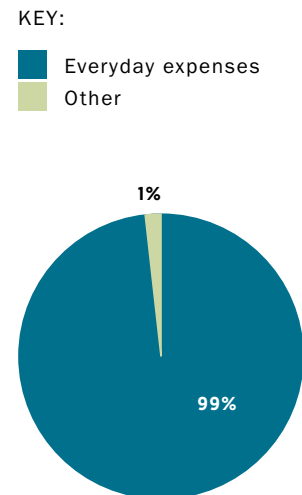


KEY FINDING III

RURAL DIARIES HOUSEHOLDS RELY PRIMARILY ON SMALL, FREQUENT CREDIT FROM INFORMAL SOURCES



Figure 7
PURPOSE FOR TAKING INFORMAL CREDIT FROM A SHOP



Rural communities in Mexico are reliant on informal credit sources which they access frequently and in small amounts. Indeed, the 2012 *Encuesta Nacional de Inclusión Financiera* found that 47 percent of Mexicans who lack access are especially reliant on informal credit. Formal financial services are not currently a realistic option in many of these areas. In the Diaries research site in Oaxaca, for example, the nearest bank is an hour away by car, a trip that costs MXN\$ 70 (US\$ 5.31) pesos one way. As mentioned above, Puebla has only one formal financial institution in the community; otherwise, households must also travel a considerable distance to access banks or retail store credit. As a result, informal credit options, such as borrowing from known shop-owners or family and friends, flourish here.

Qualitatively, we observed that women especially spent a significant amount of time making purchases for the home and tended to visit many *puestos*, or market stalls, on a daily basis. These individual purchases were small; for example, the median grocery purchase was MXN\$ 20 (US\$ 1.52) across the sample. Anecdotally, we observed that these

shopping trips allow women to cultivate and maintain a social network outside the home. Relationships with shop owners are imperative for obtaining informal credit, which is an important survival tool for Mexico Financial Diaries households, especially in Oaxaca. Eighty-nine percent of respondent households in Oaxaca used informal shop credit during the study and borrowed an average of MXN\$ 57 (US\$ 4) each time.

Some families tend to obtain credit (*fiado*) at a main shop but visit other shops for smaller needs. Credit from shopkeepers is overwhelmingly used to cover basic household expenses such as food (Figure 7). In comments from the respondent households, especially in Oaxaca, we observed that others strategically distribute their debt. One family in Oaxaca took *fiado* with every shop in the town, and, when they could not pay these shop owners, the family expanded into taking credit in the neighboring towns. Quite a bit of strategy goes into cultivating and managing these relationships with shopkeepers, who do not appear to take any interest or other incentive in return. This is likely stressful for shopkeepers, as well, who must manage credit with various clients.

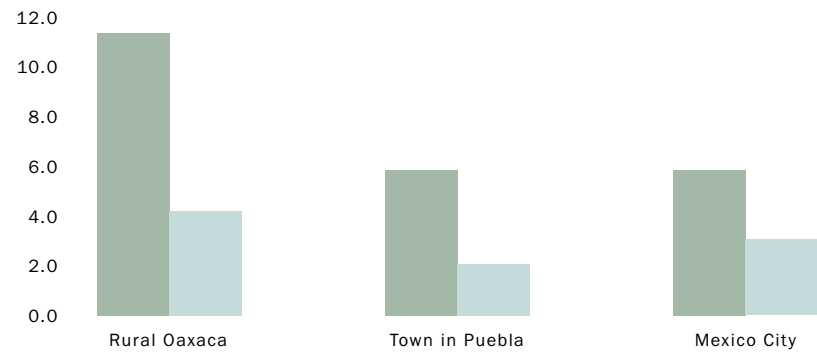
In the data, we observed that households in Oaxaca took credit (from any source) an average of eleven times, compared with those in Puebla and Mexico City, who took credit an average of six times over the duration of the study (Figure 8).

Figure 8

NUMBER OF TIMES CREDIT WAS TAKEN DURING THE STUDY BY REGION

KEY:

- Mean
- Median



¹⁰ Many indigenous cultures in Mexico use systems of traditional labor exchange often known as *tequio*. The Mixteco community in Oaxaca takes this practice seriously 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. As part of *La Guesa*, one day of the week is identified for women's labor in the community and another day for men's labor.

"Mariela" provides an example of a household that borrows frequently from shopkeepers and occasionally from friends or family. Mariela lives in Oaxaca, and, during the time of the study, her husband, Jesús, worked in Baja, California. She relies on Prospera payments (green in Figure 9 at right) and corn, which the household plants in June and July (incurring costs for labor and inputs). During lean months with no income or agricultural production, Mariela earns some income by selling sombreros in the community or by trading labor for food, a practice known as *La Guesa*.¹⁰

During the study, Mariela relied on periodic store credit from four different community shopkeepers to smooth consumption (Figure 10). Between April and July, borrowing behavior matched spending behavior, but during the second half of the year, Jesús lost his job and was no longer sending money to the family regularly. At the same time, there was a shortage of income opportunities in the community, and Mariela increased her borrowing (primarily from shopkeepers) to cover costs for food (Figure 10).

Figure 9

MARIELA'S MONTHLY INCOME AND EXPENSES

CASH FLOW CATEGORIES:

- Agricultural Expenses
- Casual Employment
- Self-Employment
- Prospera
- Education Expenses
- Clothes & Shoes
- Groceries

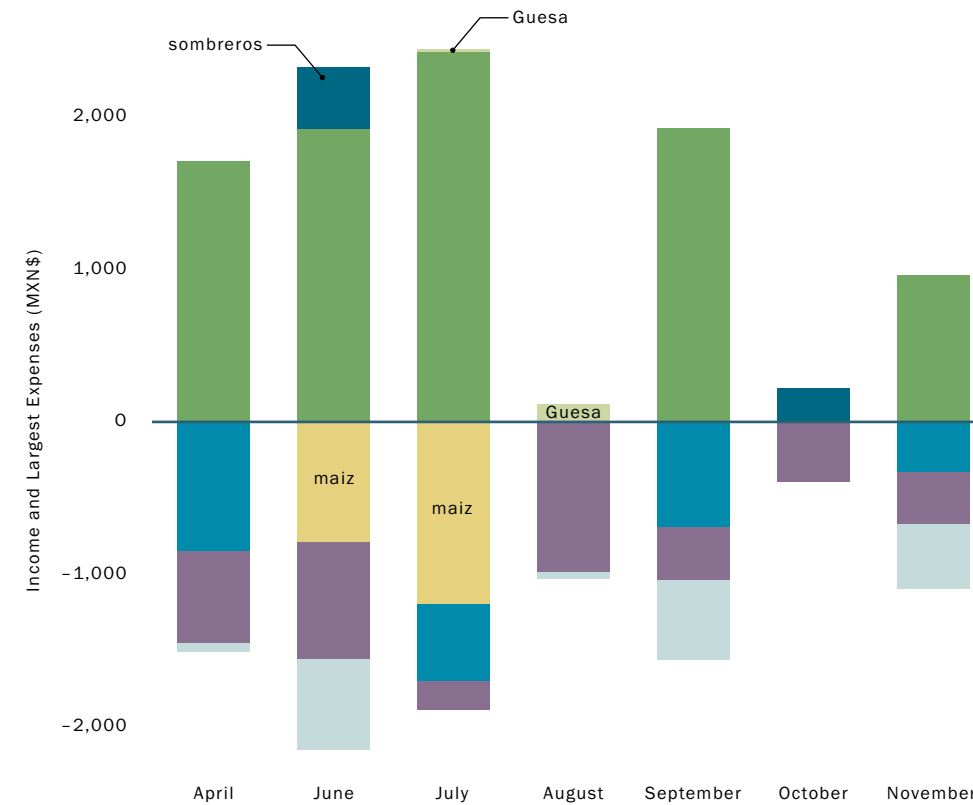
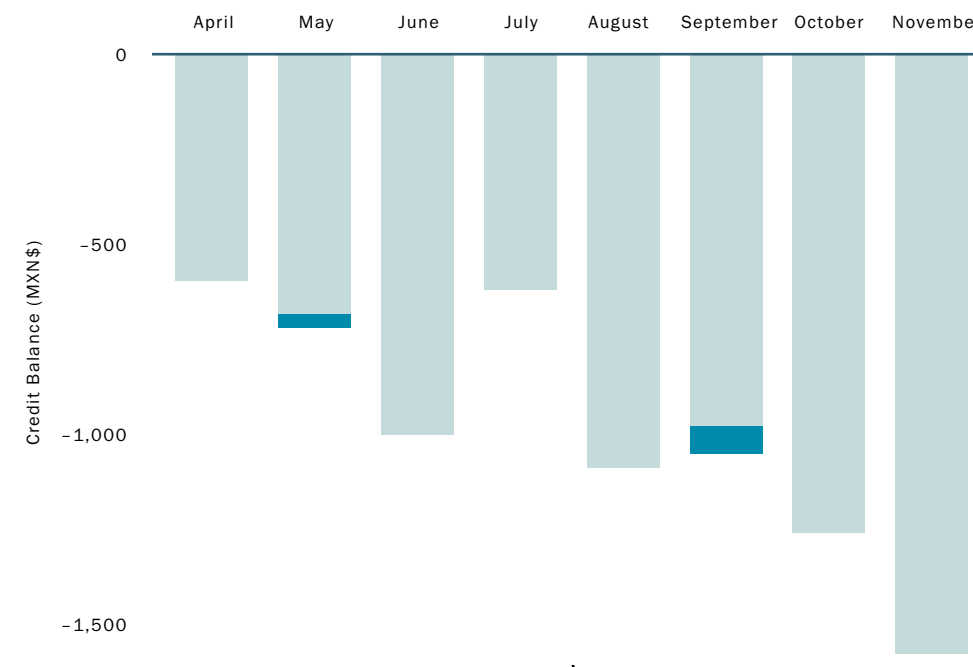


Figure 10

MARIELA AND JÉSUS'S BORROWING BEHAVIOR

TYPE OF CREDIT:

- Credit from the store
- Borrowing from friends or family



Jésus loses job and is unable to send income home; Mariela cannot find work opportunities in community.



KEY FINDING IV

RURAL DIARIES HOUSEHOLDS SCHEDULE CREDIT BORROWING AND PAYMENTS WITH PROSPERA PAYMENTS TO SMOOTH EXPENSES

As in Mariela's example, Mexico Financial Diaries households in Oaxaca use credit to manage daily expenses while waiting for uneven payment inflows (in this case, Prospera payments). We see that income in all of the Diaries research sites is volatile, but the periods between payments are more pronounced in Oaxaca (Figure 11).

As discussed earlier, credit helps households manage when income and expense timings do not align (which is often) and is especially important for households in Oaxaca, who use credit to bridge expenses when labor conditions or the harvest do not meet expectations.

Figure 12 illustrates this well; the blue line depicts the average value and timing of borrowing across all Prospera recipient respondents in Oaxaca. Borrowing occurs in the stretches between Prospera payments while credit repayments are made, like clockwork, during the same weeks that Prospera income is received.



Figure 11
AVERAGE WEEKLY
INCOME BY REGION

Figure 12 indicates that this vulnerable segment is already committing a significant proportion of Prospera income to debt repayments, and the remainder must stretch over many weeks for all other expenses. Credit products which require additional deductions from Prospera payments would likely cause additional strain for beneficiaries, especially in poor, rural areas.

During the study, Mariela was one such recipient who borrowed to bridge expenses in between Prospera payments. She took small amounts of credit when her household faced expense deficits—again, those weeks when expenses were 25 percent above mean household expenses (Figure 13). In September, Mariela mentioned

that she had to increase borrowing from shops as the labor shortage in the community made generating income difficult. But each time she had an expense surplus, she also would diligently make credit repayments (Figure 13).

It is important to note that the repayment patterns that we observed among respondent households in Oaxaca do not apply for Prospera recipient households in Puebla and Mexico City (Figure 14). Because these households rely on other sources of income in addition to Prospera, as mentioned above, repayment timings vary and are not as closely tied to Prospera payments as in Oaxaca. However, this is also likely due to the payment schedules of microfinance institutions or banks, locat-

Figure 12
CREDIT BORROWING AND PAYMENT TIMINGS COMPARED WITH PROSPERA PAYMENTS

KEY:
— Credit borrowed
— Credit paid
— Prospera income

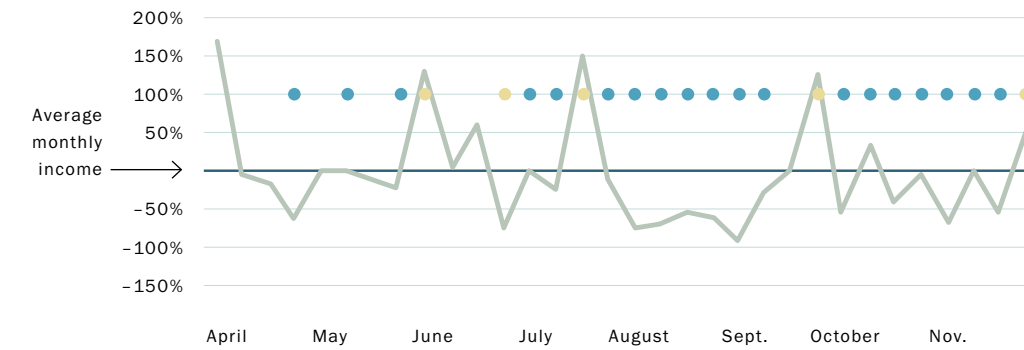
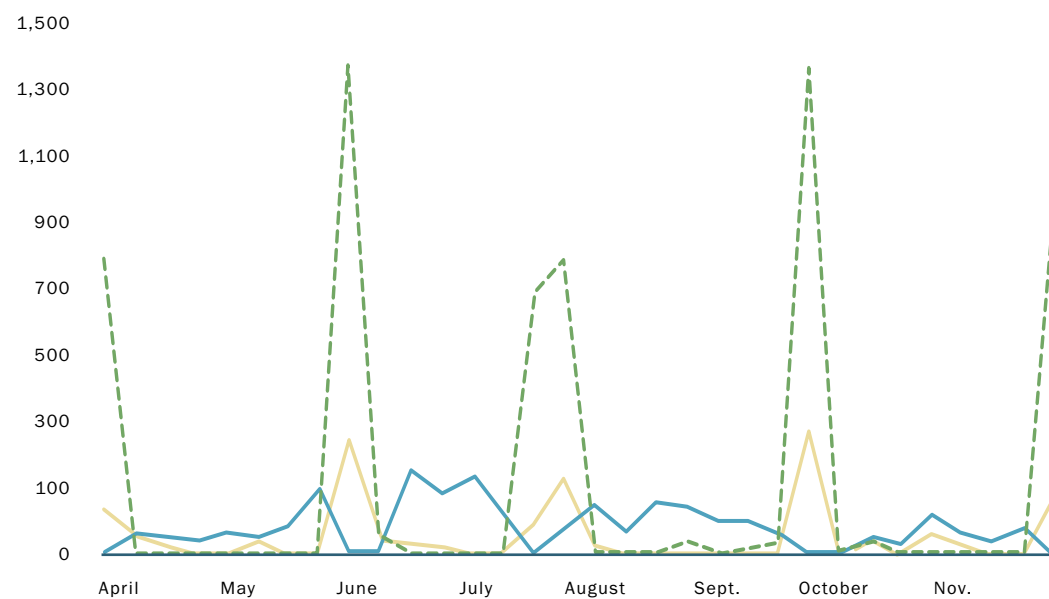


Figure 13
MARIELA'S BORROWING BEHAVIOR COMPARED WITH HER WEEKLY EXPENSE DEFICIT OR SURPLUS

KEY:
— Expense deficit or surplus
● Took any credit
● Paid any credit

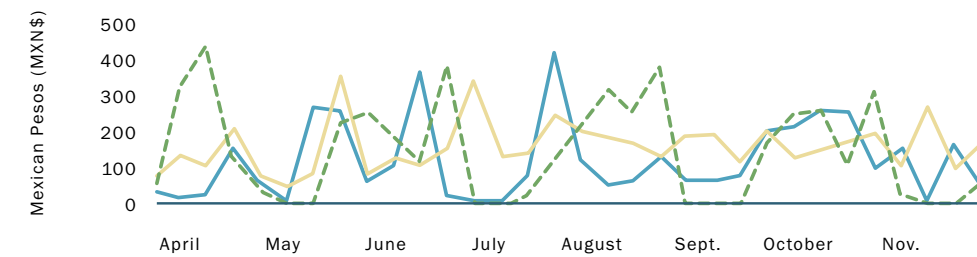


Figure 14
CREDIT BORROWING AND PAYMENT TIMINGS COMPARED WITH PROSPERA PAYMENTS, MEXICO CITY

KEY:
— Credit borrowed
— Credit paid
— Prospera income

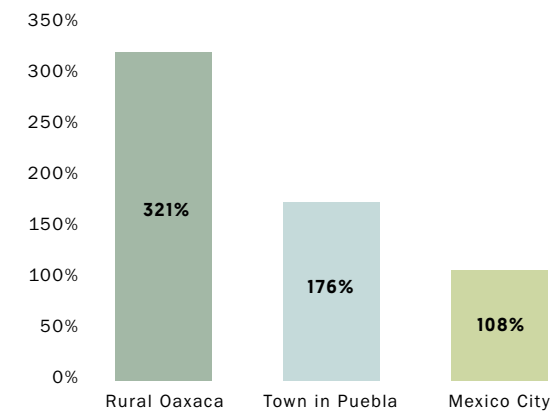


Figure 15
DEBT-TO-MONTHLY-INCOME RATIO BY REGION

ed in these areas, which require strict weekly or monthly payments regardless of Prospera income timings.

Overall, Diaries households in Oaxaca have higher debt-to-income¹¹ ratios than respondent households in Puebla and Mexico

City (Figure 15), given their lower overall incomes. While thoughtful, well-designed credit for specific purposes such as medical costs, home construction, business expansion or agriculture would likely benefit such households, these products should not be rushed into and must be navigated carefully.

¹¹ Debt-to-income ratios were calculated as the ratio of the outstanding debt balance at the end of the Diaries project to average monthly income for each household.

KEY IMPLICATIONS

Rural Diaries households in the Oaxaca research site are dependent on Prospera income, but they do not receive these payments every month. As a result, these households use informal credit options intensively to bridge daily expenses. Although these options are imperfect, requiring households to patch together many small loans (and coordinate multiple repayments), they provide much-needed flexibility in repayments. Vulnerable rural households are likely not suitable for additional credit which is tied directly to Prospera payments, but carefully designed credit products for purposes such as health, business expansion, home construction, or even agriculture may be beneficial. FSPs wishing to explore such products must carefully pilot any new products to ensure that they do not overburden this segment.



KEY FINDING V

INSTALLMENT CREDIT ALLOWS SOME HOUSEHOLDS TO PURCHASE GOODS THAT IMPROVE THEIR LIVES DURING PERIODS OF SURPLUS, BUT MORE TRANSPARENCY IS NEEDED



As mentioned in Table 2 above, households in the peri-urban communities in Puebla and Mexico City have access to expanded financial options, including a number of formal credit products such as installment credit from retail stores (Elektra, Coppel, or Sanborns).

Installment purchases allow households to acquire appliances and other goods that make their lives easier. Although respondents often pay more for the goods they buy using installments, Diaries respondents report that the discipline created by these payments is the only way they can

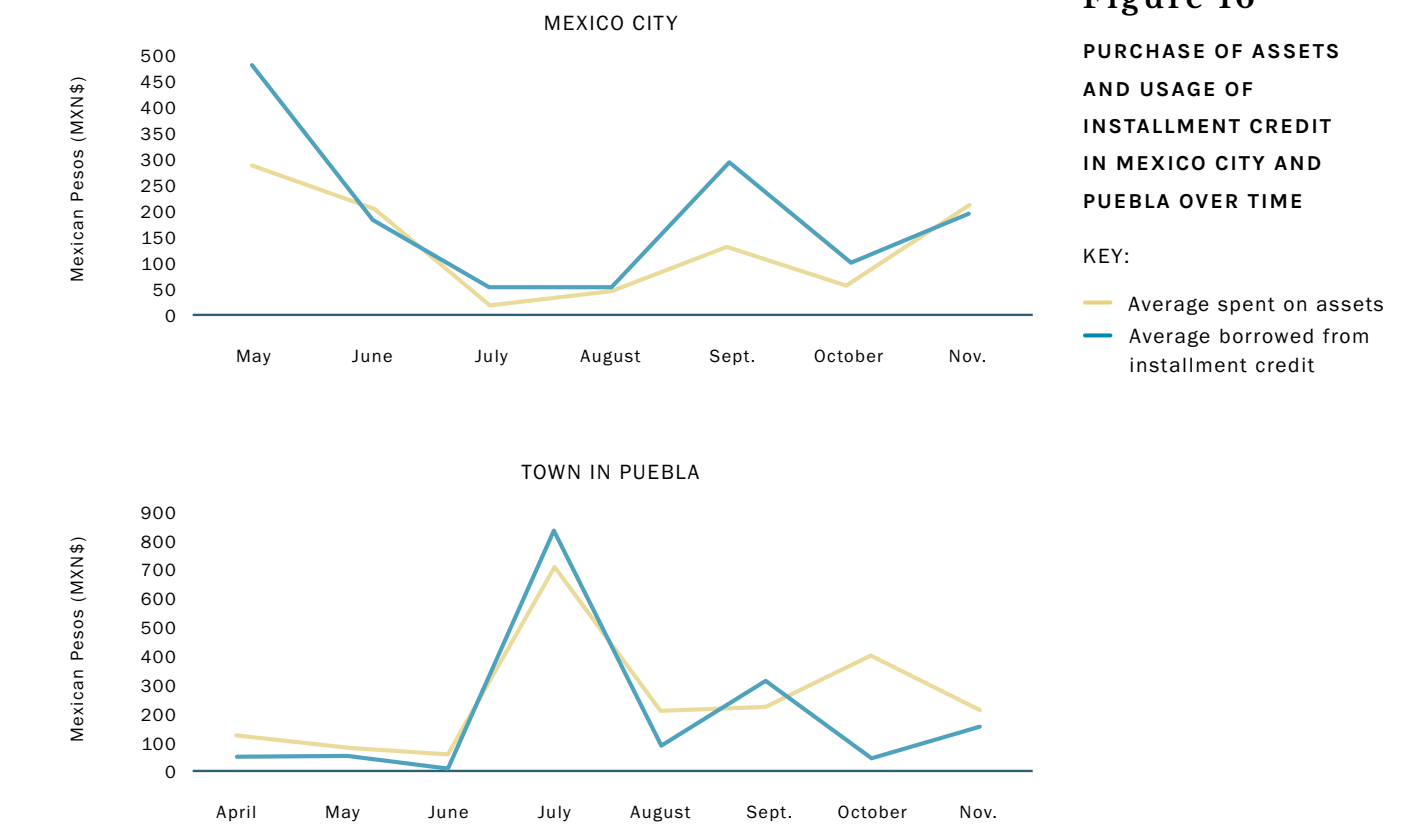


Figure 16
PURCHASE OF ASSETS AND USAGE OF INSTALLMENT CREDIT IN MEXICO CITY AND PUEBLA OVER TIME

KEY:
— Average spent on assets
— Average borrowed from installment credit

acquire these goods. In addition, even households that have acquired a lump sum may not wish to invest the entire amount in a nonproductive asset and prefer, instead, to pay small, weekly amounts while using the additional money for other purposes. While some of these installment arrangements are formal at shops like Elektra, others are with local salespeople who sell goods like beds and mattresses on installments. These informal *aboneros* often collect payments at peoples' homes, providing them with added convenience.

Respondents in Mexico City and Puebla appeared to use installment credit to purchase most new assets during the study, as shown in Figure 16, emphasizing the importance of installment credit in making the acquisition of household goods manageable.

The data shows that households take advantage of installment credit to buy a range of goods, from cellular phones and shoes to larger items such as furniture and appliances. Table 3 illustrates the types of items for which households borrowed, along with the average price paid for each.

Median value of each installment payment

MXN\$ 100
(US\$ 7.59)

Mean value

MXN\$ 197
(US\$ 14.95)

Table 3

PURPOSE AND AVERAGE VALUE OF INSTALLMENT PURCHASES MADE BY DIARIES HOUSEHOLDS

ITEM / LOCATION OF PURCHASE	MXN\$	US\$	ITEM / LOCATION OF PURCHASE	MXN\$	US\$
Avon	800	61	Land	37,333	2,833
Batteries	1,300	99	Liquid Soap	100	8
Bed	3,875	294	Mattress	4,865	369
Bedsread	300	23	Microwave	1,100	83
Bicycle	800	61	Mobile phone	1,646	125
Blender	1,065	81	Perfume	150	11
Boat	330	25	Pork	450	34
Clothing	616	47	Pressure	750	57
Cookware	750	57	Pressure cooker	1,200	91
Coppel	1,297	98	Rice	733	56
Cosmetics	279	21	Screen	2,711	206
Dishes	688	52	Shoes	520	39
DVD player	1,210	92	Stereo	2,440	185
Eyeglasses	750	57	Stove	3,373	256
Fertilizer	920	70	Stroller	755	57
Fridge	4,460	338	Truck	17,000	1,290
Furniture	4,004	304	Tub	660	50
Grill	900	68	Tupperware	400	30
Guitar	1,400	106	Underwear	550	42
Hawker	2,025	154	Washer	3,188	242
Iron	900	68	Water container	900	68

These types of purchases ranged in value from MXN\$520 (US\$ 39) for shoes to upwards of MXN\$ 4,000 (US\$ 303) for larger appliances and furniture. While some of these goods, such as DVD players, are arguably non-essential, other goods, such as refrigerators, stoves, and bathtubs, make material improvements in these families' lives. This system is highly compelling because Diaries respondents prefer to have the good now and continue owing money rather than trying to save for large purchases, a task that seems daunting, particularly since many Diaries households lack access to other relevant financial instruments to help accomplish this. Diaries households appear to save to come up with installment payments, and use informal tools (such as tandas) to do so.

We observed some indication that households, during times in which they have an expense surplus, consider installment credit as a bridge to acquire goods which make their lives more convenient (Figure 17). This extra cushion might make them feel comfortable enough to make larger purchases.



Figure 17

TYPE OF CREDIT USED BY EXPENSE SURPLUS OR DEFICIT

- CREDIT INSTRUMENTS:
- A. Consumer loan
 - B. Friends and family
 - C. Employer
 - D. Microfinance loan
 - E. Credit card
 - F. Credit at the store
 - G. Installment credit

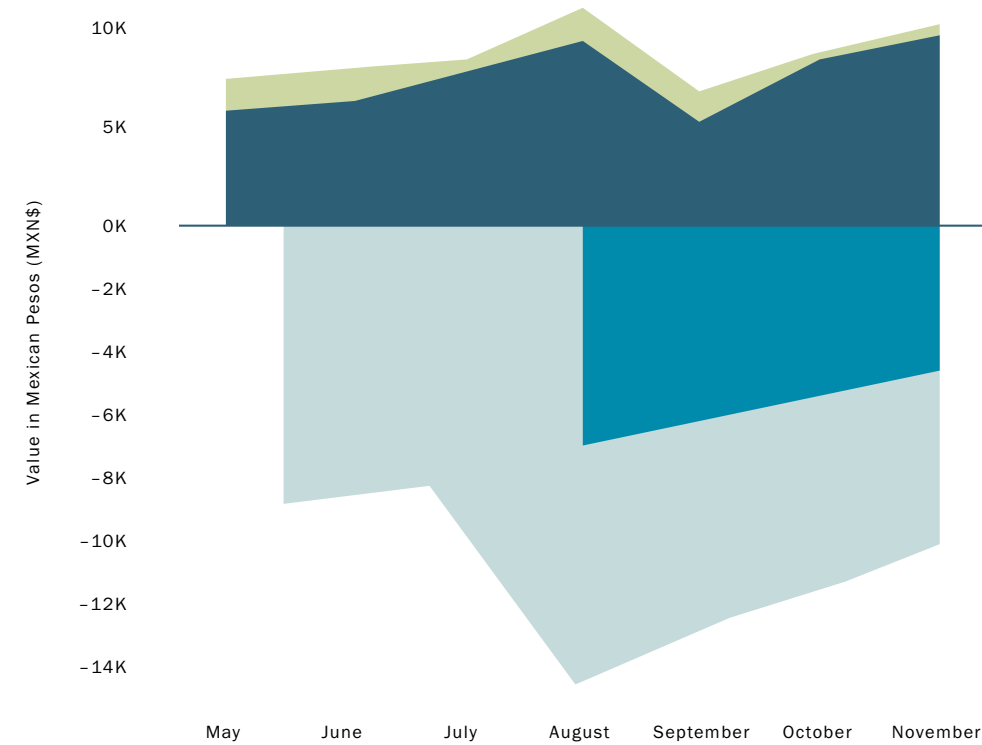


Figure 18

ARTURO AND YOLANDA'S INCOME AND CREDIT OBLIGATIONS (IN MXN\$)

- CASH FLOW CATEGORIES:
- Casual employment
 - Regular employment
 - Installment purchases
 - Microfinance loan

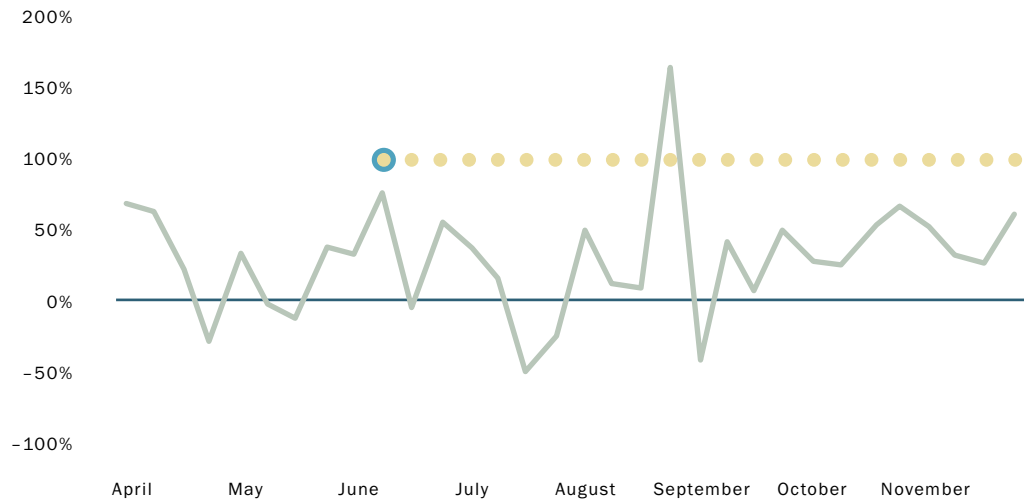
“Yolanda” and “Arturo” provide one such example. They live in Mexico City with their three children. Arturo receives regular income from construction work as do their two eldest daughters who are adults and work in the market. Yolanda earns income from casual sources such as volunteering with a local political party during elections. In June, the household received a Prospera payment which, combined with the household's other income, encouraged Yolanda to decide to place a down payment on a refrigerator for the household using installment credit (Figure 18).

Figure 19

ARTURO AND YOLANDA'S WEEKLY EXPENSE SURPLUS AND DEFICIT, COMPARED WITH CREDIT AND REPAYMENT BEHAVIOR

KEY:

- Weekly expenses gap
- Took any credit
- Paid any credit



The refrigerator cost MXN\$ 9,300 (US\$ 700.62) which would be paid over a year and a half with weekly payments of MXN\$ 160 (US\$ 12.14). Although Yolanda and Arturo knew school fees and associated costs would begin in August and September, the weekly payments were manageable and allowed them the mental security to make this investment. Figure 19 above shows the household's weekly expense gaps, positive and negative. June was, indeed, a period of surplus. Arturo and Yolanda paid diligently each week for the remainder of the study.

However, it is concerning that respondents lack complete information about the full costs of their installment purchases: 34 percent of households using installment purchases reported that there was no difference in price between buying the good on installments and paying the full price for the good (Figure 20). While this might be true in some cases, others might not be aware that there is a cost associated with paying over time. In the case of Arturo and Yolanda, for example, it is not clear if the household fully understood the additional costs of paying for the refrigerator via installment credit (estimated to be an additional MXN\$ 3,500 [US\$ 265.56]). Of course, many households

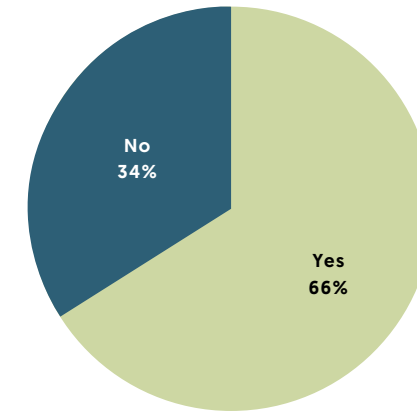
may still prefer the convenience of small, weekly payments despite the additional cost. Further research or surveying can test effective ways to help low-income households compare these costs.

Among those who did report that the good would have been cheaper if they paid the full amount, the average reported addition to the price for paying over time was quite significant at MXN\$ 1,226 (US\$ 93.02).

Furthermore, households often keep records of how many payments they have made in paper notebooks or receipts (sometimes provided by formal retailers), but it can be easy to make a mistake in the amount or to become confused about the terms. During the

Figure 20

REPORTED AWARENESS OF COST OF PAYING IN INSTALLMENTS



course of determining how many installments they owed, one household in Mexico City realized they had overpaid for a bed and had kept making payments beyond what they should have.

Some households are juggling a number of installment payments, which causes problems when an important source of income does not arrive. With many payments slotted up to the budget limit, households sometimes have to decide which installments to pay, a situation which one of the respondents described:

"Karen's husband has not worked as there has been no work for him the past few weeks...Karen had to borrow money from her mother, and last week she tried hard not to spend any money. They haven't been making their loan payments: for the installment payments, Karen decided not to pay for the pressure cooker, because she didn't have the money. But she did make a payment for the DVD player as the 'abonero' [man who comes to collect] is much grumpier."—Mexico City

Services that can help clients consolidate and track multiple installment purchases may help alleviate the burden of keeping track mentally or in many paper books and may help them to save up to make these weekly or monthly payments as well.

KEY IMPLICATIONS

While installment credit is an important means of purchasing goods which improve the well-being of low-income Mexicans' lives, the arrangements for such credit require better solutions to help households keep track of payments around multiple installments. In addition, the Diaries research suggests that households do not always understand the total costs incurred with installment purchases. Although it is likely that households prefer the convenience of paying small, weekly payments for an additional price, providers should clearly explain to clients exactly how much clients will repay by the end of their credit term compared with the amount the item would cost if paid for upfront. This may require providers to experiment with how to display this information, especially for low-income households who are likely to be less literate. Further research can explore how these installment credit arrangements differ between formal providers and aboneros in terms of pricing, size of credit, products offered, and means of conveying information about costs.





KEY FINDING VI

WHILE FORMAL CREDIT HELPS HOUSEHOLDS TO PURCHASE ASSETS AND IMPROVE HOUSING, THE DIARIES SUGGESTS THAT FORMAL CREDIT SOLUTIONS FOR EDUCATION AND HEALTHCARE CAN BE IMPROVED

¹² This question was added after the start of the Diaries, so it does not include responses for all credit taken throughout the study.

We asked households why they took out each new loan.¹² In Figure 21, we see that 81 percent of informal loans were taken to cover daily expenses. Again, this is because it is common to take out many small, short-term loans in the form of credit from shop owners. But this is not limited to informal credit; 21 percent of new formal credit was also taken for everyday expenses. Many families heavily rely on credit to cover basic expenses like food, clothing, and transportation.

When we look more closely at the difference between the uses of formal and informal credit, it appears that formal credit meets a demand to purchase assets (as discussed above) and to improve housing, with which informal credit options do not compete. Credit for healthcare and education, however, is divided between informal and formal credit sources, and emergencies are covered solely by informal credit sources. This suggests that formal credit options for healthcare, education, and emergencies are either unavailable or can be improved.

Figure 21
REASON FOR NEW FORMAL AND INFORMAL BORROWING, VOLUME OF NEW LOANS

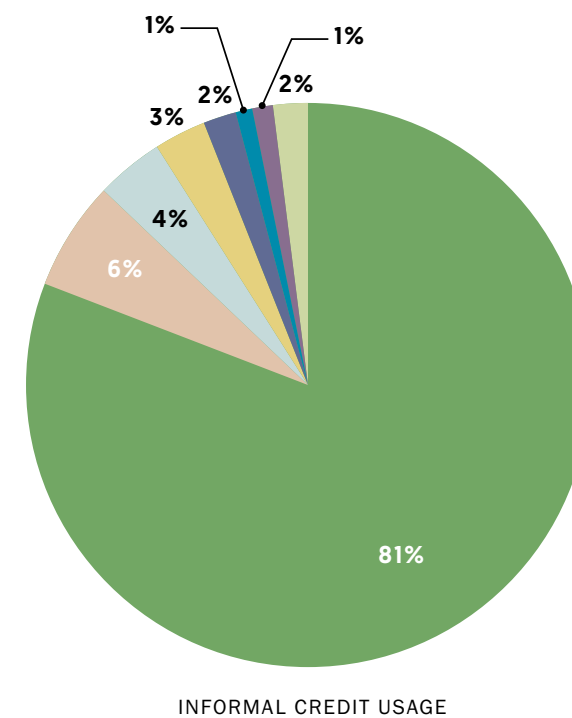
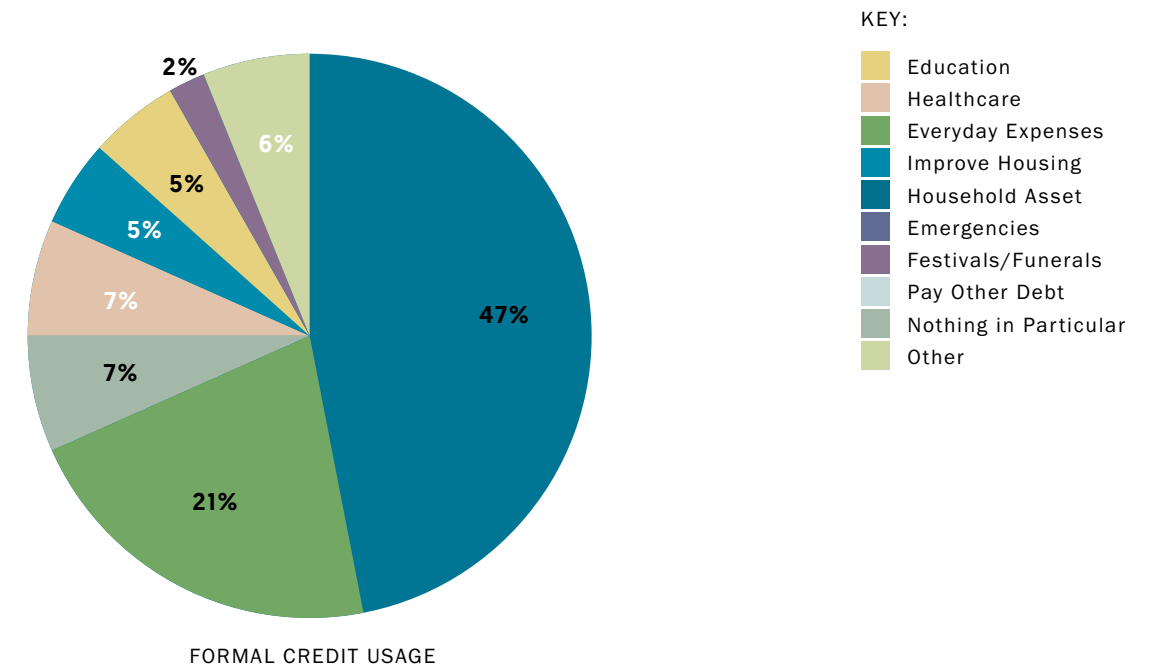
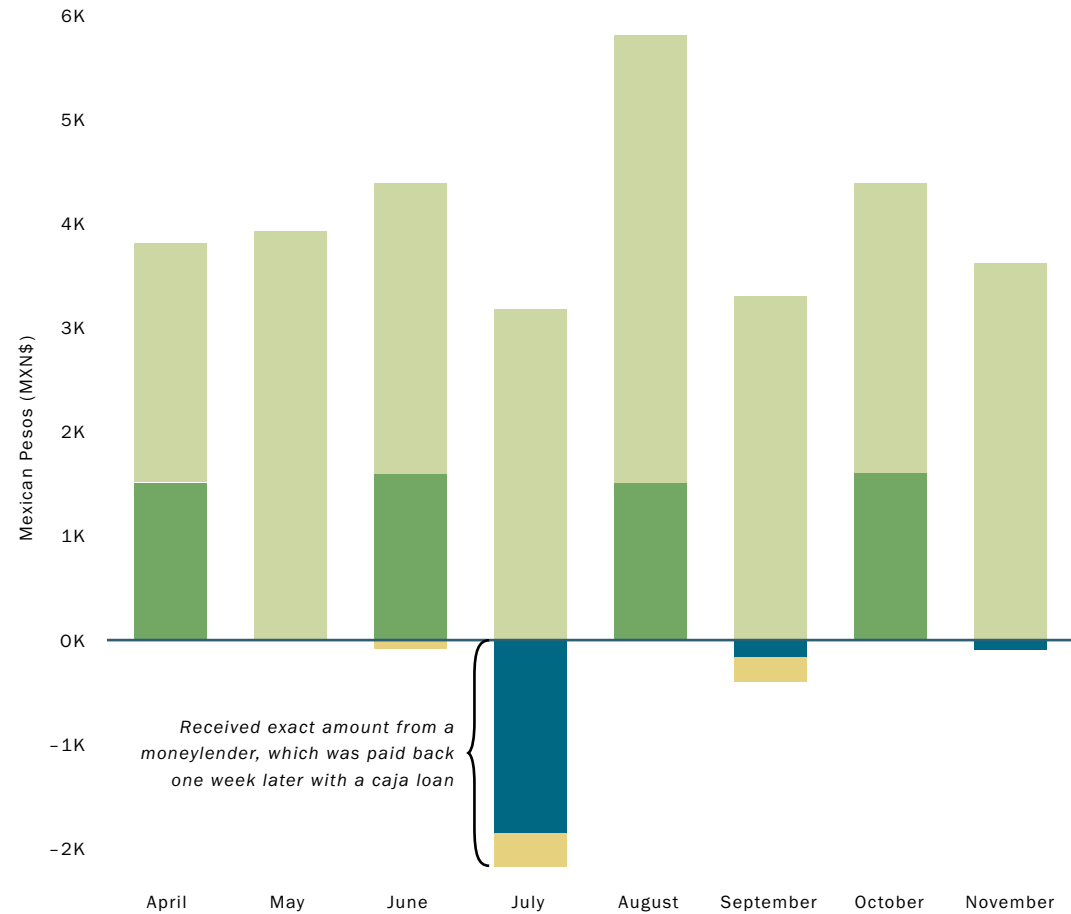


Figure 22

SILVIA AND MIGUEL'S CASH FLOWS

CASH FLOW CATEGORIES:

- Other income
- Prospera
- Medicine
- Emergencies



“Silvia” and “Miguel,” respondents living in Puebla, provide an example of a household that first approached a moneylender during a health emergency despite having an account with a local caja. In July, their daughter became ill with a chest infection and was rushed to the hospital. In total, the medical expenses came to MXN\$ 2,200 (US \$167), which they borrowed immediately from a moneylender (Figure 22). Despite their relationship with the caja, they could only access an additional caja loan after the emergency, which they used to repay the moneylender a week later.

Also according to the data, borrowing from family and friends is important for seasonal and unexpected expenses such as school fees or healthcare emergencies. Across the sample, borrowing from friends and family is closely correlated with spending on education (Figure 23).

And in Mexico City, family and friends are important for dealing with unexpected health care costs, despite a number of formal options such as microfinance lenders, credit unions, and banks (Figure 24).

This may partly result from the fact that, on average, friends and family are able to provide a relatively large amount (MXN\$ 963 or US\$ 73.07), especially compared with informal shop credit, and often do not charge interest on loans. Friends and family might also be considered more likely to respond quickly compared with formal credit options which require a number of procedures or paperwork. However, because these social support networks are often struggling as well, they may not always be able to provide support or do so in time. One researcher recounted the following story about a respondent named “Dorotea”:

“Dorotea’s foot is healing, but her mother has been sick. Her brothers have helped with the expenses so that she can go to the doctor, but sometimes they take a long time taking [Dorotea’s mother to the hospital] or giving her medications. Dorotea gets distressed because she sees her [suffering] all day long and can’t do anything about it.”

Figure 23

SPENDING ON EDUCATION VERSUS BORROWING FROM FRIENDS AND FAMILY, ENTIRE SAMPLE (MXN\$)

KEY:

- Average school spending
- Average borrowing from friends and family

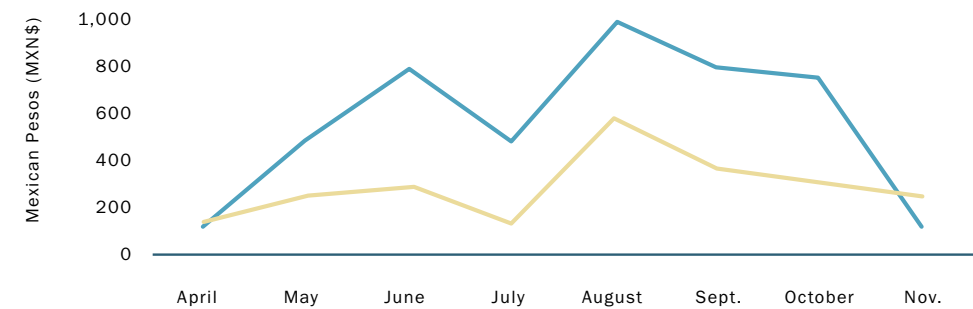
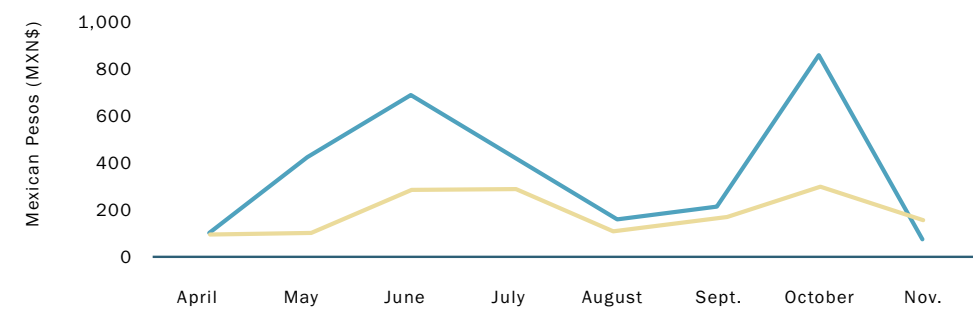


Figure 24

HEALTH CARE SPENDING COMPARED WITH BORROWING FROM FRIENDS AND FAMILY, MEXICO CITY

KEY:

- Average spent on health
- Average borrowed from friends and family



While we do see that households are using formal credit for these purposes as well (Figure 21), the fact that households use informal credit options for the same purposes (healthcare and education, for example) suggests that a demand for specialized credit options exists.

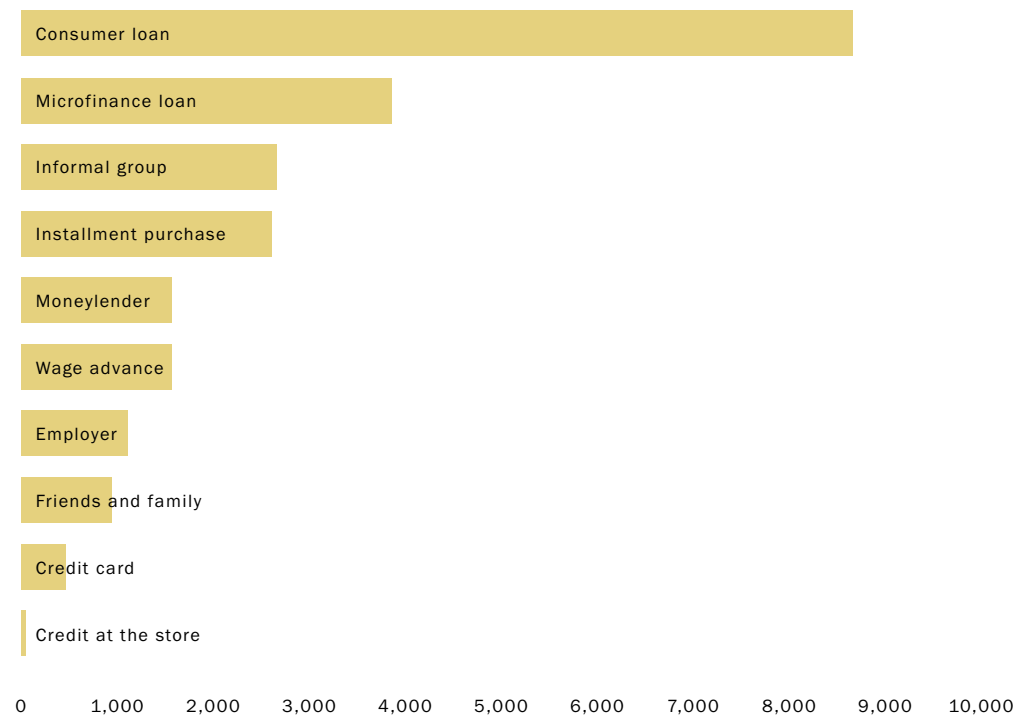
Possible solutions include allowing households to deposit small savings amounts with pharmacy chains, which have branches throughout Mexico. These savings could be used towards the purchase of medicines, and pharmacies could provide small credit top-ups for slightly larger amounts.

Additionally, given that social support networks are often relied upon for these needs, multi-payer accounts which allow family members or friends to deposit directly at schools, retail chains, or pharmacies towards specific needs could be beneficial. Finally, while the Diaries shows that households are using formal credit for home construction and repairs, many Mexican families aspire to own a sturdy house on their own land. Credit solutions specifically targeted to these goals may resonate with low-income families.



Figure 25

AVERAGE VALUE OF LOAN BY SOURCE (IN MXN\$)



KEY IMPLICATIONS

Formal credit seems to have found a niche in allowing households to purchase assets and to improve housing, but there appears to be unmet demand for formal credit options designed for education, business expansion, or unexpected expenses such as healthcare. Households use informal and formal credit at the same frequency for these purposes, which suggests that formal credit may not yet be flexible or affordable enough for these purposes. Marketing tailored to these specific needs might help as might offering smaller-value credit, credit top-ups, or multi-payer accounts for these purposes.

IMPLICATIONS FOR FINANCIAL SERVICE PROVIDERS

1

FSPs wishing to target low-income customers must segment further to design and offer appropriate products.

As the Mexico Financial Diaries research shows, low-income Mexican households are not a nondescript group. Low-income Mexican households live diverse and varied lives and require financial products tailored to these distinct realities. For example, the lived experience of households in the rural Oaxaca community is widely different than in Mexico City and even in the peri-urban community in Puebla. Rather than segmenting based on income alone, a household's location and primary source of income in addition to other factors, such as gender or age, must be considered for appropriate product and channel design.

2

Low-income households are not new to credit although they may be new to formal institutions.

In fact, the Diaries research shows that credit plays a central role in bridging the everyday expenses of these households when incomes do not match expense flows. FSPs seeking to downscale to the low-income market must recognize that they are competing with entrenched credit solutions which often offer benefits to low-income households, such as small-value credit which can be accessed relatively quickly and repaid flexibly. These options are by no means perfect, however, and formal providers can add value by addressing existing pain points or filling unmet needs.

3

Households that are dependent on Prospera income as their primary income source (such as the Diaries households in Oaxaca) appear to schedule credit repayments with Prospera payments.

Credit from local shops provide very small amounts of credit and require households to maintain and manage multiple lines of borrowing and associated repayments, which can be time consuming. But these informal solutions provide critical flexibility in repayments. In order to compete with informal options, FSPs must also allow households to pay flexibly. However, tying additional credit to Prospera payments would likely result in harm for these households. Credit for education, business expansion, or agriculture, which is not yet available in these rural communities, may be beneficial but must be piloted carefully.

4

Installment credit allows many low-income households to buy assets which improve their quality of life, but more transparency about credit arrangements is required.

We observed that households with access to installment credit (those in Puebla and Mexico City in the Diaries sample) use this credit to purchase household assets which might otherwise seem unobtainable. But knowledge about the full costs related to these credit arrangements can be limited, and keeping track of multiple installment payments is often challenging. Additional research into the differences between formal and informal credit options provided by aboneros with regards to pricing and disclosure may help to guide policies to increase transparency. Further, solutions to help households consolidate and track re-payments may be beneficial.

5

The Diaries research suggests that there may be unmet demand for formal credit options designed for education or unexpected expenses such as healthcare.

Many households rely on family and friends for these purposes, but often, these social networks may not be in a position to assist in a timely manner. Marketing small-value credit specifically for these purposes may serve an unmet need as could taking advantage of retail or pharmacy chains which have branches throughout Mexico as potential pay-in points.



METHODOLOGY & DESCRIPTION OF SAMPLE

Financial Diaries are not journals that families keep or self-reported 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.

Table 4

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 areas 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, and about a twohour drive from Puebla city. There are limited economic opportunities in this community, with many households struggling to find consistent and well-paying work. Quite a few households rely on agriculture for income. Public services are variable.	A rural community in the Mixteca region with about 5,800 inhabitants. It is governed by autonomous indigenous local norms (<i>Usos y Costumbres</i>). There is no cell phone signal in this isolated community nor reliable transportation to the nearest town.
Financial services available	There are a few microfinance offices within the community, and ATMs are nearby. Slightly further afield, residents have access to large commercial banks and retailers as well as smaller FSPs.	One cooperative, Caja Popular Mexicana, is the only formal provider in the town. To access other financial services, residents travel using two minibuses to one of two nearby towns, a journey that takes just over one hour.	During the Diaries, there were no FSPs in the community. Previously, a caja had operated in the area, but it went out of business, eviscerating community members' savings. Residents take taxis that cost MXN\$ 70 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%)

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.¹³ 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.

The Mexico Financial Diaries followed 185 families in three locations representing three very different examples of Mexican life. Our research team visited these households 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 the paper).¹⁴

As the Dairies study worked with the National Savings and Financial Services Bank (BANSEFI) and the Ministry of Social Development (SEDESOL)¹⁵, a key objective was to understand the financial needs of beneficiaries of the Prospera program, at the time known as Oportunidades.¹⁶ About two-thirds of the sample 185 households received Prospera (Table 4). The other one-third of the sample were 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.

¹³ 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.

¹⁴ 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 keep the most helpful months of data questions. 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.

¹⁵ Ministry that oversees the Prospera social program.

¹⁶ 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.



