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DEL OTRO LADO

Financial behavior of households receiving international remittances in the Mexico Financial Diaries

BY CAITLIN SANFORD

Bankable Frontier Associates

FOMIN
Multilateral Investment Fund
Member of the IDB Group

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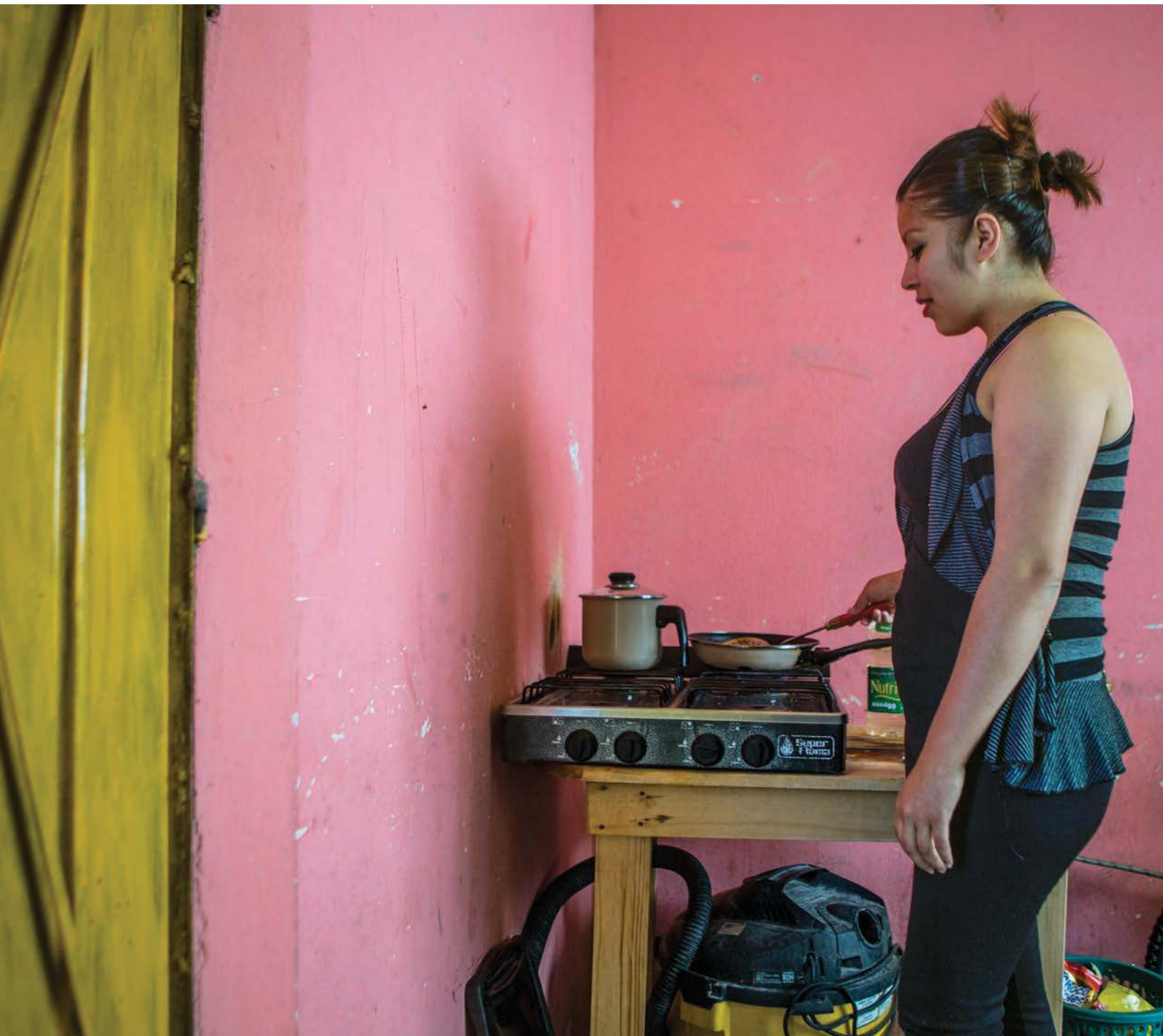

ACKNOWLEDGEMENTS

Rebecca Rouse of the Remittances and Savings Program at the Multilateral Investment Fund had the idea to leverage the Mexico Financial Diaries data to learn about remittances behavior, and oversaw the project through its duration, providing key comments and guidance. Fermín Vivanco, Claudia Gutiérrez, María Luisa Hayem, and Lukas Keller also reviewed the draft and provided essential feedback. At Bankable Frontier Associates (BFA), Justin Grider and Laura Cojocaru carried out the Financial Diaries data analysis for this report. Kristy Bohling contributed to shaping the findings and insights. Mexican field researchers Cristal Garcia, Antonio Lopez, Pablo Fernandez, and Ana Maria Lirios contributed to fieldwork, conducting follow up interviews with Financial Diaries families who had received international remittances, as well as phone interviews with their family members in the US. During the Mexico Financial Diaries project, Carolina Ruesga of GESOC A.C. directed and led the project, providing intellectual leadership and supervision throughout. In addition to the four field researchers mentioned who participated in follow-up visits for this study of remittance receiving households, Adriana Cardoso, Nora Cambroni, and Alberto Montaño dedicated 18 months to the Diaries project from 2013 through February 2015. Rodrigo Hernandez served as the data analyst and Elisa Porte was the field supervisor during this time.

Above all, we are grateful to the Mexican families—in Mexico and the US—who bravely agreed to share their personal stories and the details of their financial lives.

EXECUTIVE SUMMARY

This report was commissioned by the Remittances and Savings Program of the Multilateral Investment Fund to provide insight into the financial lives of remittance recipient households in Mexico. This information will inform both private and public sector initiatives to leverage migrant remittances for wealth building throughout Latin America and the world.

The research finds that remittance income is just one of many sources of income for these families. On average, households earned income from 6.5 different sources during the Financial Diaries study, including remittances. Remittance payments tend to be irregular and may exacerbate income volatility. The frequency of remittance payments is often a function of the employment situation and financial needs of the migrant sender. The research shows that some households are able to use financial instruments to smooth consumption in the absence of consistent income. Among the households included in this study, informal credit instruments dominate financial portfolios. The most common informal credit instrument used were loans from friends and family, buying goods on credit from local shops, and participation in rotating savings and credit associations (ROSCAs). The study found that families direct the majority of their remittance income towards daily household expenses, including increased spending on healthcare, better quality food, and education. In addition to meeting their basic household needs, recipients also leverage remittance payments as a sort of insurance mechanism, and request money in the case of emergencies or an unexpected need. Finally, the study showed that housing, education, and preparing for the migrant remittance sender's return were the main motivations for saving among these households.

Recommendations from this study include the following: (i) expand payment options in underserved areas; (ii) increase options for the direct payment of goods and services by the migrant; (iii) develop remittance-linked credit products to facilitate investment and reduce household vulnerability; (iv) explore the use of flexible savings incentives, rather than rigid commitments to respond to remittance income volatility; (iv) promote financial products and messaging using the concept of 'investment' rather than 'savings'; (v) help consumers make decisions about financial instruments; and (vi) do more to communicate information about options to migrant remittance senders abroad.

"These are my savings that will be useful at some point … to remodel the house … perhaps to add more rooms. Or they could be for an illness: there are always many emergencies."

▶▶▶ **Respondent in Oaxaca**

"I don't save, because [my daughter] doesn't send me money regularly, and she doesn't send much. She only sends me enough to cover what I really need. This is why I have not been able to save."

▶▶▶ **Respondent in Oaxaca**

INTRODUCTION AND BACKGROUND

The US- Mexico remittance corridor and financial inclusion

Receiving US$ 24.8 billion in remittance flows in 2015,[1] Mexico ranks fourth in the world in terms of the value of incoming international remittances.[2] In the US, Mexican migrants make up a large and important population. According to the 2013 American Community Survey, 28% of all migrants in the US are from Mexico, accounting for an estimated population of 11.6 million adults.[3] While the importance of remittances for economic development is well documented,[4] leveraging remittances for financial inclusion at scale has proven to be more elusive.[5] It is not clear that remittance receivers have greater access to formal financial tools than others do. For example, Li et al. (2014) found that households in Mexico that receive money from abroad are slightly more likely to have a savings account and use a bank branch, but are less likely to use ATMs or to purchase insurance.[6]

Through research and pilot project financing, the Remittances and Savings Program[7] at the Multilateral Investment Fund (MIF)[8] of the Inter-American Development Bank Group (IDBG) has long supported transnational families across the Americas to capitalize on remittance flows in order to enhance their financial health. The Program has supported a number of large quantitative surveys of migrants, including a 2013 survey of 2,000 migrants from Latin America and the Caribbean looking

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1 http://www.banxico.org.mx/.
2 Ratha, D., et al. "Migration and Remittances: Recent Developments and Outlook Special Topic: Financing for Development." Migration and Development Brief 24. The World Bank. Washington, D.C., April 13 2015.
3 Zong, J., Batalova, J. "Frequently Requested Statistics on Immigrants and Immigration in the United States." Migration Information Source. Washington, D.C., February 26, 2015.
4 Ratha, D. "The Impact of Remittances on Economic Growth and Poverty Reduction." Migration Policy Institute Policy Brief No. 8. Washington, D.C., September 2013.
5 See for example Anzoategui, D. et al. "Remittances and Financial Inclusion: Evidence from El Salvador." World Bank Policy Research Working Paper 5839. The World Bank. Washington, D.C., October 2011.
6 Li et al. 2014. "Do remittances foster financial inclusion in Mexico?" BBVA Research: Financial Inclusion Economic Watch. BBVA Bancomer Research. Mexico City, July 22, 2014.
7 http://www.remittancesandsavings.org/
8 http://fomin.org/

at changes in remittances following the recession,[9] including a subsample of 1,000 Mexican migrants in three US cities.[10] This report complements findings from quantitative surveys with detailed, fine-grained data from a much smaller sample using BFA's Financial Diaries methodology. Financial Diaries allow us to track income, expenses, and financial transactions precisely over time, offering a holistic view of household finance. Such in-depth views yield insights about the "why" behind financial decisions, which we hope can inform financial product design and the delivery of financial services to clients who receive remittances.

This paper begins with methodology, and then presents information about the financial behavior of remittance recipient households in the financial diaries. Next, we present the main findings, followed by four in-depth case study profiles of families. In a final section, we present recommendations.

About the research

With this research, the Remittances and Savings Program and Bankable Frontier Associates (BFA)[11] sought to gain an in-depth view into the lives of international remittance recipients in Mexico. We were especially interested in the frequency and size of remittance payments, the extent to which these households save from these payments, and the barriers to doing so.

This report presents cash flow data from the Mexico Financial Diaries project, as well as results from in-depth follow-up interviews with 16 Diaries households that received international remittances during the project. We also draw upon supplementary interviews with remittance recipients in Financial Diaries communities who did not participate in the study.

The Mexico Financial Diaries

The Mexico Financial Diaries was an intensive research project that collected detailed financial information from 185 low-income families from December 2013 through February 2015.[12] BFA worked with the Mexican research firm GESOC A.C.[13] to implement this project in the states of Puebla and Oaxaca, as well as in Mexico City. In BFA's Financial Diaries methodology, researchers administer three initial questionnaires that capture information about demographics, income sources, and the use of financial instruments. Then researchers revisit the families every two weeks over the course of about 11 months in order to track all household income, expenses, and other financial transactions. Although the Mexico Financial Diaries ran from March 2014 through January 2015, for many households the last month of January does not contain complete data. Therefore, most of the analysis in this report covers 10 months of Financial Diaries data.[14] Although this methodology captures data on hundreds of thousands

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[9] Orozco, M., Jewers, M. "Economic Status and Remittance Behavior among Latin American Migrants in the Post-Recession Period." Multilateral Investment Fund. Washington D.C., April 2014.

[10] Multilateral Investment Fund. "Infographic: Financial Inclusion of Mexican Migrants in the United States." Washington, D.C., July 2014.

[11] http://www.bankablefrontier.com

[12] The project was supported by the Bill & Melinda Gates Foundation and the World Bank through a grant given to BANSEFI, the state bank of Mexico that is responsible for making social transfer payments for the Prospera program, formerly Oportunidades.

[13] http://www.gesoc.org.mx

[14] In some cases where cash flows are incomplete, we only include eight months of Financial Diaries data.

of financial transactions, households participating in the study were not selected to be representative of any segment of the Mexican population. The findings presented here are not representative of Mexican families receiving international remittances. Additional information about this project and the methodology used is available in Annex A.[15]

The original Mexico Financial Diaries project did not focus on international remittances. Rather, the principal objective of the study was to learn about the financial behavior and needs of families who receive the government conditional cash transfer *Prospera*, previously known as *Oportunidades*.[16] The *Prospera* program is administered by Mexico's Social Development Secretariat (SEDESOL) and payments are made through a state-owned bank, *Banco del Ahorro Nacional y Servicios Financieros* (BANSEFI). Program beneficiaries must comply with a series of educational and health requirements as part of the conditions of their participation. In order to determine eligibility, the program uses means testing to confirm that beneficiary households are indeed below the poverty line. SEDESOL also relies on local staff and uses household visits, as well as requirements in the application process that filter out wealthier households, to confirm eligibility. Nationwide, about 6.5 million program beneficiaries now receive *Prospera* payments using an open loop debit card issued by BANSEFI.

Prospera beneficiaries made up two thirds of the Diaries sample. Because of this focus, we hypothesize that these families are poorer than the average Mexican family that receives international remittances. The mean per capita monthly income for all Financial Diaries households was MX$ 863 (US$ 57). Among our subset of remittance recipient households, per capita monthly income was actually slightly lower than that of the sample as a whole, at MX$ 826 (US$ 55), or less than US$ 2 per person per day.[17]

Of the households included in the original Financial Diaries sample, only 16 received international remittances during the course of the study: 13 in Oaxaca and three in Puebla.[18] Although this is not a large enough sample from which to draw generalizations, looking at these case studies in detail unveils general themes about the structure of remittance income and barriers to saving.

Follow-up interviews

As the original Financial Diaries project did not ask about remittances specifically, the research team conducted follow-up interviews with remittance recipient households, and, when possible, with the migrant remittance senders in the United States, in order to obtain more targeted information. BFA and field researchers who participated in the original Mexico Financial Diaries project returned to these households in September 2015 and conducted additional qualitative interviews focusing on:

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[15] Throughout this report, we use the exchange rate of 15 Mexican Pesos to 1 US dollar, the average exchange rate in 2015.

[16] For more information see: http://www.sedesol.gob.mx/en/SEDESOL/Prospera

[17] The lower income among remittance recipients is due to the fact that 13 of the 16 households are from the Oaxaca field site, which is the poorest. Mexico City households that are included in Diaries analysis but not in this report bring up the average monthly per capita income.

[18] We include cash flow data from 16 of the families that received any money from international remittances during the research period. For three additional families included in the research, their relatives migrated towards the end or after the study and remittance, income is not included in the initial Financial Diaries data, but we did carry out follow up interviews with these families.

- Changes in remittance inflows and income since the end of the Financial Diaries project in February 2015;
- The ways in which the household received remittances, and any associated challenges;
- The ways in which households managed decision making and communication between the family member who migrated and the family in Mexico; and
- Respondents' savings behaviors, including motivation for saving and barriers to putting money aside from remittance payments, among other questions.

For more information on the methodology used in these follow up interviews, please see Annex B.

TABLE 1 ▶▶▶ Description of two research sites included in this research

	Remittances	Community
Small town **PUEBLA**	■ In 2013, the state of Puebla was the sixth largest recipient of international remittances in Mexico, representing 6.1% of the total share of remittances to the country that year.[a] ■ International remittances represented 3.4% of Puebla's state GDP in 2013.[b] ■ 64.5% of Puebla's population was living in poverty in 2014.[c]	■ The town is located about 200 kilometers (125 miles) southeast of Mexico City. ■ The town is home to about 2,500 inhabitants.
Rural Mixteca community **OAXACA**	■ In 2013, the state of Oaxaca was the eighth largest recipient of international remittances in Mexico, representing 5.3% of the total volume of remittances that year. ■ International remittances represented 5.6% of Oaxaca's state GDP in 2013, and Oaxaca was the state with the third highest dependency on remittances income that year.[d] ■ 66.8% of Oaxaca's population was living in poverty in 2014.[e]	■ The rural community is located in a mountainous area called *La Mixteca* in the northeastern part of Oaxaca near the Guerrero state line. ■ The community is home to about 5,800 inhabitants.

[a] Fundación BBVA Bancomer, A.C. "Yearbook of migration and remittances Mexico 2015." Mexico City, December 2014.
[b] *Ibid*.
[c] Consejo Nacional de Evaluación de la Política de Desarrollo Social, accessed December 15, 2015, http://www.coneval.gob.mx/medicion/Paginas/PobrezaInicio.aspx.
[d] Fundación BBVA Bancomer, A.C. "Yearbook of migration and remittances Mexico 2015." Mexico City, December 2014.
[e] Consejo Nacional de Evaluación de la Política de Desarrollo Social, accessed December 15, 2015, http://www.coneval.gob.mx/medicion/Paginas/PobrezaInicio.aspx.

The research sites: a tale of two communities

Among the three Mexico Financial Diaries research sites, international remittance recipients were identified only in the small town in Puebla and in the rural community in Oaxaca. No households in the Mexico City sample received international remittances during the course of the project, which is consistent with data showing that the Federal District of Mexico City has the eighth lowest rate of emigration in the country, out of a total of 32 jurisdictions.[19] Table 1 presents key characteristics of these two communities.

[19] Fundación BBVA Bancomer, A.C. "Yearbook of migration and remittances Mexico 2015." Mexico City, December 2014.

	Description and economic opportunities	Migration corridors	Infrastructure and financial services infrastructure
PUEBLA	■ Economic opportunities in this community are limited, with many households struggling to find consistent and well-paying work. ■ There is not much industry in the town itself, although the state of Puebla is home to factories and production plants, including a large Volkswagen factory. However, these employers are too far away from the town to offer viable employment prospects. ■ Quite a few households rely on agriculture for income. ■ The town is well known in Puebla for having good mariachi bands, and a few Financial Diaries households count musicians among them.	■ Migrants we spoke to from this village were located in Oregon, Washington, and California.	■ Financial services access points are sparse in this part of Puebla: the town is home to one established cooperative (*caja*)[f] and a Diconsa store, the subsidized grocery chain that has partnered with BANSEFI and SEDESOL to make *Prospera* payments. ■ The *caja* does pay out remittances, and is supervised by Mexico's banking commission (CNBV for its initials in Spanish). ■ For remittances sent via other companies, such as Western Union or MoneyGram, residents have to travel to one of two larger towns, each about 30 minutes away. This trip costs MX$ 40 round trip (US$ 2.67).
OAXACA	■ The community is governed by an autonomous indigenous local government *(Usos y Costumbres),* meaning that indigenous law is allowed in local elections and governance. Most of the population earns income from agriculture and construction work. ■ Apart from agriculture, there are very few opportunities for earning income in the community and the nearby area. Migration to other parts of Mexico and the US is consequently seen as an attractive option.	■ Migrants we spoke to from this community were located in Kentucky, Tennessee, Florida, North Carolina, New York, and Illinois.	■ This community is extremely isolated, and there is no cell phone service in this mountainous area. Although there is now an internet café and a few houses have internet that they allow community members to use to make calls, communication is not easy. ■ It takes about one hour by taxi to get to the nearest town, and the trip requires driving through a shallow river, as there is no bridge. The cost of getting to the closest town is substantial for community members, at MX$70 ($4.67) round trip. ■ Some people still use the local radio station, *Radio de la Mixteca*, as a primary means of communicating with relatives in the US (See Box 1).

[f] *Cajas* fall under the regulatory division of "Savings and Loan Cooperatives" established by the CNBV. In the case of the town in Puebla, this is a formal institution supervised by the Central Bank and offering deposit insurance. However, some smaller *cajas*, such as the in the small town in Oaxaca, are not formally sanctioned by financial regulators in Mexico.

BOX 1 ▶▶▶ Radio de la Mixteca

The lack of cell phone service and limited options for internet in the Oaxaca community presents particular challenges for communicating about money as well as other aspects of life with family members living abroad. The Oaxaca Financial Diaries community is not alone in this respect. Anecdotally, cell phone service is spotty in many mountainous areas of Mexico, and this may disproportionally affect indigenous and low-income populations.

Radio de la Mixteca, a local radio station in Oaxaca, was the only way migrants communicated with their families for many years before cell phones. The radio station is still functioning, and older community members especially still rely on this method of communication. Migrants call a US number to record messages for their family members and these messages are broadcast in a daily show called *"Vuela vuela palomita," or* "Fly, Fly, Little Dove." Some migrants still use the show to tell their family members what day their money would be arriving and when to travel to the payphone to call them and get the pin number. As one respondent described,

"People still use it; many people send greetings, those who are on the other side [in the US]. They greet their family members during the show at 11 am. . . . People also send news about migrants who have crossed the border and arrived safely."

– Respondent in Oaxaca who communicated with her husband using the radio show when he was in the US.

About the remittance recipient households

Migrant relationship and share of income from remittances

Table 2 presents demographic information about the 16 households that received income from international remittances during the Financial Diaries study. Because of existing migration corridors and the tight-knit nature of migrant networks, migrants from these communities tend to concentrate in the just a few locations in the US.[20] Most of those who migrated from the Oaxaca community are working in Florida, North Carolina, Kentucky, or Tennessee, whereas all the migrants from the Puebla interviews were on the West Coast of the US, either in Oregon, California, or Washington. Construction and agricultural work are the most common jobs among migrants from both communities. Table 2 provides information about these 16 families.

The households included in this study from Oaxaca are especially poor and vulnerable. Eight of the thirteen houses receive *Prospera*, and many of these households are engaged in subsistence agriculture, meaning that they consume some or all of what they produce. Incomes for the Puebla sample are higher than those in Oaxaca (Figure 1). Many of these families—31 out of 58 Diaries households in the community—run their own businesses and there is more economic activity in the town, including a large market on Tuesdays and Saturdays that attracts buyers from surrounding villages. Remittances make up

[20] See for example Annex VI in Hernández-Coss, R. "The U.S.-Mexico Remittance Corridor: Lessons on Shifting from Informal to Formal Transfer Systems." World Bank Working Paper No. 47. Washington D.C., February 2005.

TABLE 2 ▶▶▶ Details of households receiving remittances during Financial Diaries

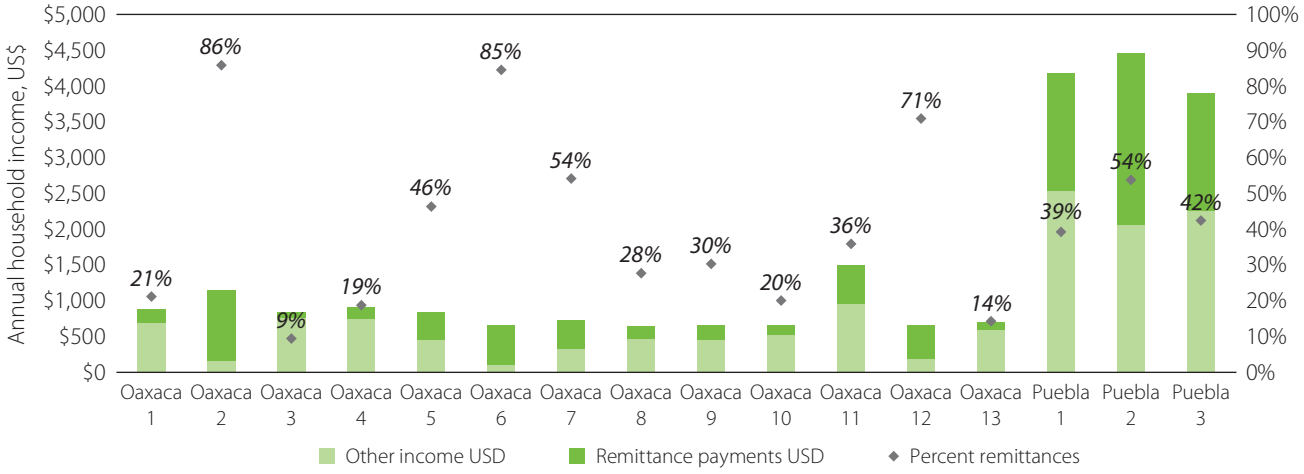
Household code	Household size in Mexico	Location of migrant in the US	Family members in Mexico: relationship to migrant and ages[7]	Received *Prospera* during Financial Diaries
Oaxaca 1	4	Man, Florida	Mother 73; brother 24; niece 8, nephew 6	Yes
Oaxaca 2	4	Man, Florida	Wife 30; children ages 15, 6, 1	No
Oaxaca 3	2	Two children, man and woman, North Carolina	Mother "Patricia" 51; sister "Monica" 22	Yes
Oaxaca 4	3	"Edmundo," North Carolina	Sister "Marisol" 22; brother-in-law 23; daughter 3	Yes
Oaxaca 5	3	Man, California	Mother 62; wife 23; son 1	Yes
Oaxaca 6	3	Husband was in US, returned to Mexico*	Mother-in-law 60; wife 24; daughter 3	No
Oaxaca 7	3	Man, New York	Daughter "Rocío" 36; grandchildren 11 and 5	No
Oaxaca 8	5	Man, Tennessee	Mother 57; father 57; brother 25; brother 21; niece 15; nephew 9	Yes
Oaxaca 9	2	Woman, Florida	Mother (does not know her age); brother 17	No
Oaxaca 10	5	Man, Illinois	Wife 28; daughter 4; mother-in-law 59; sister 28; niece 9; nephew 7	Yes
Oaxaca 11	4	"Francisco," Kentucky	Wife "Anita" 39; son 19 (studying medicine in Ciudad Juarez); son 16	Yes
Oaxaca 12	2	"Luis," travels between Tennessee and Kentucky	Wife "Sofía" 31; son "Eddy" 5	No
Oaxaca 13	3	Man, Tennessee	Mother 46; son 23; son 11	Yes
Puebla 1	4	Woman, California	Mother 64; father 69; sister 45; niece 20	No
Puebla 2	3	Man, Oregon	Ex-wife "Ursula" (age unknown); daughters 10 and 12	Yes
Puebla 3	5	Man, California	Mother "Graciela" 55; father 62; brother 24; twin brother and sister 17	No

* This family declined to be interviewed.

an important share of income[21] for many of the households included in this research, accounting for more than 50% of total income for five out of 16 households. Outputs from subsistence farming also contribute to consumption for the Oaxaca households.

[21] Our Financial Diaries methodology captures business expenses, such as wholesale purchases and agricultural investments, as negative income. To calculate profits only these cash flows should be subtracted from revenue. In this graph we include all revenue to understand how income compares with the share of money coming into the households from other sources.

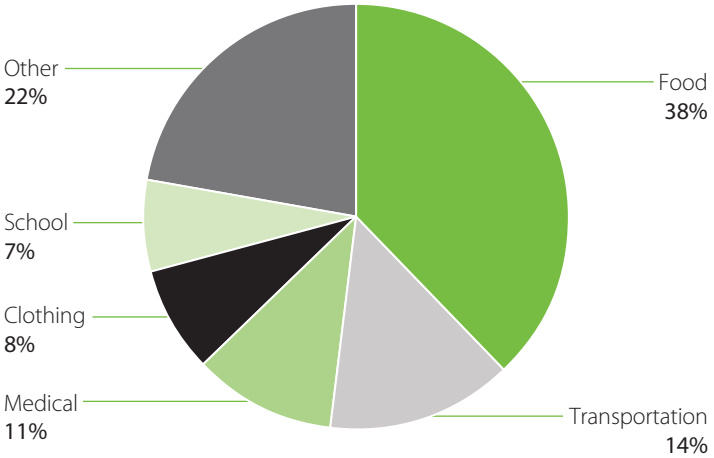
FIGURE 1 ▶▶▶ Remittances as a percentage of total household income, households receiving remittances during Financial Diaries



Assets, expenses, and wellbeing

Although monthly per capita income for these 16 households works out to be less than US$ 2 per person per day, some Financial Diaries households do own more material wealth than these low incomes would indicate. The average reported value of assets in Mexico among these 16 families is MX$ 242,000, or US$ 16,135. We present detailed information about non-financial asset ownership for these households in Annex C. Home ownership accounts for a large share of asset values: 14 of the 16 households own the residence in which they live. As a result, the average net worth of these households is high relative to their income, despite the fact that they are cash poor. However, these households do not consider many of these assets—especially the most valuable, the family home—to be liquid. This means most households report that they would not sell these possessions to get extra cash in an emergency.

FIGURE 2 ▶▶▶ Top household expenditure categories among remittance recipients (value)



Note: Cumulative data for the 16 remittance recipient households over the duration of the Financial Diaries study

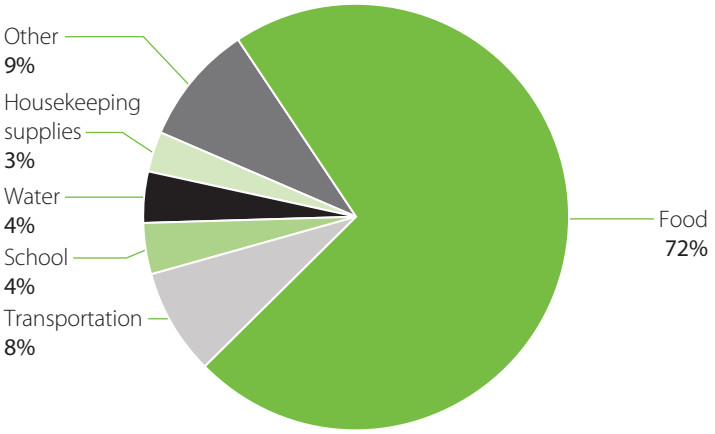
Figure 2 shows the top categories of expenses for the 16 households who receive international remittances over the course of the study, in terms of the value spent. Figure 3 shows the expense categories with the highest number of transactions over the course of the project. The largest expense categories in terms of both value and volume for the 16 remittance recipient households are food and transportation. Medical expenses also account for a non-trivial 11% of total spending value among these households.

The Financial Diaries methodology also captures data about life events and wellbeing during

each interview. Of the 16 remittance recipient households, six households reported a family member who needed medical attention at least once during the duration of the study but did not seek treatment because of cost. For example, "Graciela"[22] in Puebla Household #3 experienced a number of stomach and colon problems during the study, requiring expensive diagnostic tests (see Case Study 1). Graciela was unable to pay for the medical care that her doctors recommended and did not get recommended care on seven different occasions. Additionally, members Oaxaca Household #2 reported going to sleep hungry on two occasions.

In the next section, we present the main results of our research on financial behavior related to remittances.

FIGURE 3 ▶▶▶ Household expenditure categories with highest number of individual financial transactions among remittance recipients (volume)



Note: Cumulative data for the 16 remittance recipient households over the duration of the Financial Diaries study

[22] All names have been changed to protect anonymity of respondents.

KEY FINDINGS

Remittance income is just one of many sources of income

Although remittances may be the only source of income for some families, this is not the case for the international remittance recipients in the Financial Diaries sample. These 16 households received income from an average of 6.5 different sources during Financial Diaries study (Table 3). In addition to international remittances, six of these households also received payments from family members living in Mexico.

Additional income generating activities that these families engage in include full-time employment, agriculture, receiving *Prospera,* self-employment—such as selling food, cosmetics, clothing or other products—, and doing odd jobs, among others. Some of these income sources may be temporary: Diaries respondents often earn extra income from short-term opportunities, like selling sweets at Christmas or helping farmers during harvest time.

Illustrating this reliance on multiple sources of income, Oaxaca Household #3 received income from nine different sources during the Financial Diaries study. Matriarch "Patricia" has three children in the US, two of whom sent her money during the Financial Diaries study. Her daughter "Monica" is employed as a secretary in a local municipal office and contributes her salary to the maintenance of the household. In addition to this income, Patricia receives a government transfer, operates an informal business milling corn and other grains out of her home, does casual agricultural labor for other landowners, participates in traditional communal unpaid labor,[23] and sells crops from her own production.

That remittance income is just one of many income sources for remittance recipients is relevant for designing financial products design for these households.

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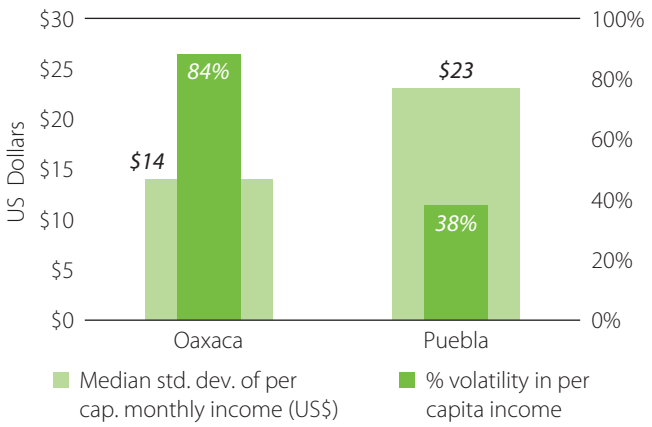
[23] Many indigenous cultures in Mexico use systems of traditional labor exchange which they call *la guesa*. The Mixteca community in Oaxaca takes this practice seriously, with households exchanging days of labor like a currency. When one person performs a day of labor on another community member's farm, they are then owed a day of labor from this person's family.

TABLE 3 ▶▶▶ Number of income sources of remittance recipient households

Household code	Income sources	Also receives contributions from other family members living in Mexico
Oaxaca 1	6	No
Oaxaca 2	6	Yes, from father
Oaxaca 3	9	No
Oaxaca 4	7	Yes, from a relative (did not specify)
Oaxaca 5	5	No
Oaxaca 6	6	Yes, from a friend
Oaxaca 7	6	Yes, from a sister
Oaxaca 8	5	No
Oaxaca 9	3	No
Oaxaca 10	7	No
Oaxaca 11	6	No
Oaxaca 12	4	No
Oaxaca 13	7	Yes, from a daughter-in-law
Puebla 1	13	Yes (did not specify)
Puebla 2	5	No
Puebla 3	10	Yes, from a daughter
Average for 16 households	**6.5**	

Remittance payments tend to be irregular and may exacerbate income volatility

FIGURE 4 ▶▶▶ Income volatility among all 185 Financial Diaries households



With households patching together income from short-term and intermittent activities, month-to-month income is highly variable for Financial Diaries households. We measure income volatility at the household level by taking the standard deviation of household monthly income and dividing by the mean monthly income for each household. We then take the average volatility for each community. Figure 4 shows the median standard deviation in US dollars and the average percent volatility for all Financial Diaries households by community. Monthly per capita income is more volatile in Oaxaca than in Puebla, reaching 84% average volatility in monthly household income, compared with 38% volatility in Puebla.

Returning to the subset of 16 remittance recipient households, the volatility of monthly per capita income is even higher. This is likely because many of the recipient households in our sample do not receive a remittance payment every month, contributing to further fluctuation in monthly income. Average monthly income volatility is 98% for the 16 remittance-receiving households. Figure 5 shows volatility in monthly per capita income per household.

In an illustration of how infrequent remittance payments can be, some families only received international remittances one or two times over the course of ten months (Figure 6).

According to our interviews, remittance flows are irregular because migrants in the US struggle to find and keep consistent work.

> *"[In the US] jobs are not permanent. [Migrants] work on building condominiums and residences and sometimes [the bosses] move the workers around or fire them."*
>
> ▶▶▶ **"Marisol", Oaxaca Household #4**

> Question (Q): Why is it difficult to save from remittances?
>
> *Answer (A): Because sometimes there is no work, constant work is hard to come by."*
>
> ▶▶▶ **Oaxaca Household #13**

"Ursula" in Puebla Household #2 was one of the respondents who received remittances most frequently during the study. Ursula's ex-husband sent money 26 times during nine months of cash flow data collection. Although she received many payments, Ursula did not receive income from remittances every month, as her ex-husband did not send money in the months of June or August. Despite receiving remittance income frequently, Ursula's aggregate household monthly income is still highly variable (Figure 7).

FIGURE 5 ▶▶▶ Volatility of monthly per capita income among remittance recipient households

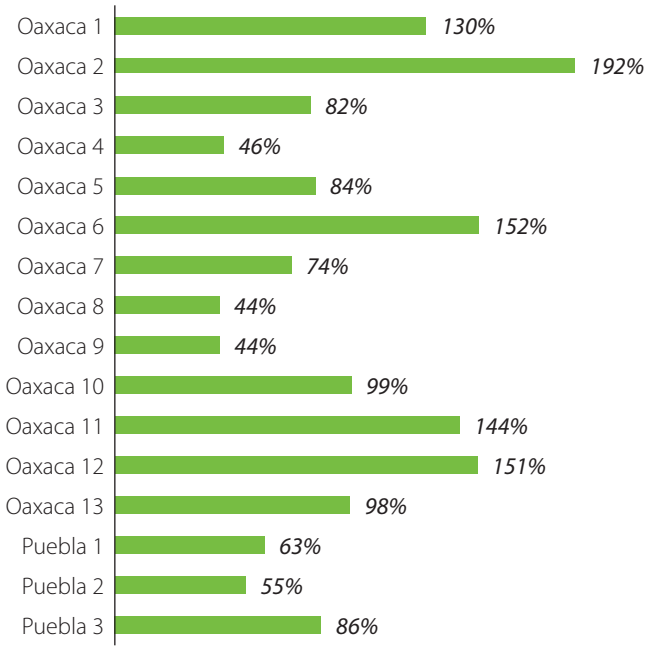


FIGURE 6 ▶▶▶ Total number of times households received international remittances recceived in nine months of the Financial Diaries study

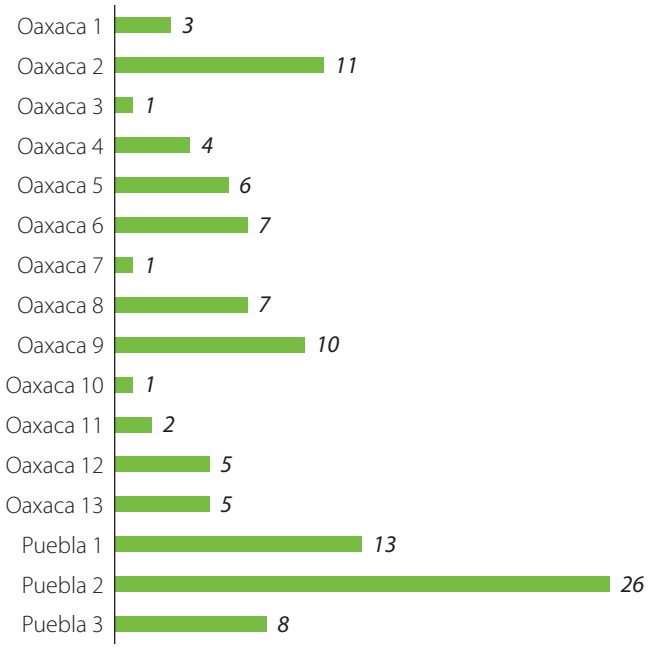
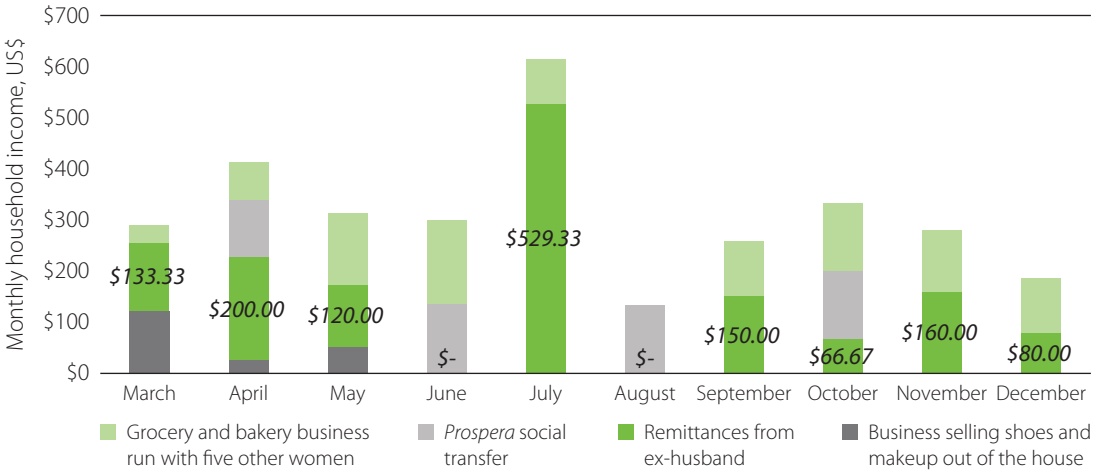


FIGURE 7 ▶▶▶ Ursula, Puebla Household #2: Composition of income sources (dollar amounts are remittance income only)



To cope with irregular income, Financial Diaries households try stretch income by doing odd jobs in slow months. Households also adjust expenses to match higher and lower incomes, but as some essential expenses cannot be cut back others come up unexpectedly, this is an imperfect strategy. Some households are able to use financial instruments to smooth consumption. For example, credit at the local store is common in Oaxaca and allows families to obtain food and pay later during difficult months. Better financial tools could help these households better cope with inconsistent income.

Informal credit instruments dominate financial portfolios

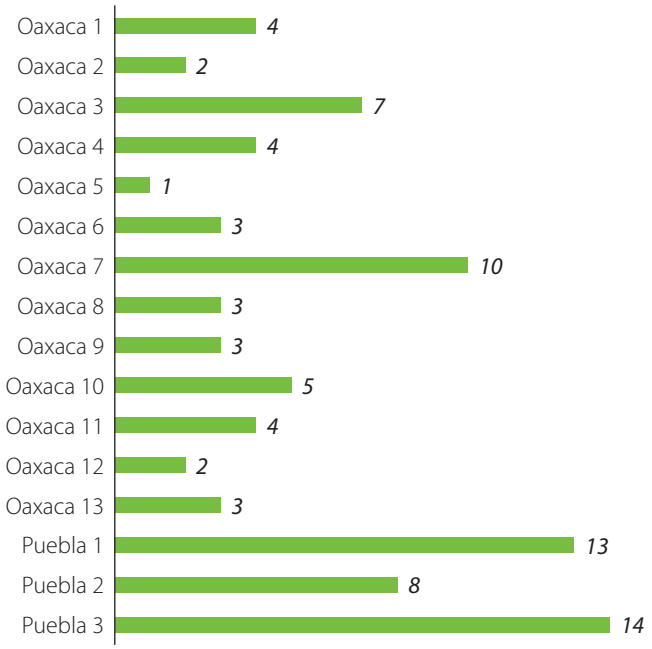
The 16 remittance recipient households used an average of 5.4 financial instruments per household during the Financial Diaries study. These families relied heavily on informal credit instruments, using on average 2.8 informal credit instruments per household. We distinguish between formal financial instruments, which are products offered by financial institutions, and informal financial instruments, which are often provided by individuals or peer groups. Examples of informal financial instruments include saving cash in the house, borrowing from family and friends, and taking goods on credit from shops and paying the storeowner later. Mexico Financial Diaries households in general use more credit products more intensively than savings products. Table 4 and Figure 8 show the number of financial instruments the 16 international remittance recipient households used during the Financial Diaries study.

TABLE 4 ▶▶▶ Average number of financial instruments used by remittance receiving households

	Average number of financial instruments used
All financial instruments	5.4
Formal savings instruments	1.1
Informal savings instruments	0.5
Formal credit instruments	0.8
Informal credit instruments	2.8

The most common strategies used for saving were saving cash at home and participating in rotating savings and credit associations (ROSCAs) or accumulating savings and credit associations (ASCAs). 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. In Mexico, both structures of savings groups are known as *tandas*.[24]

FIGURE 8 ▶▶▶ Number of financial instruments per household, remittance recipient households



Although some households, especially in Puebla, built up large savings balances relative to their income using tools like saving cash in the house and in simple bank accounts (see Tables 6, 7, and 8 and associated discussion), this was not the case for most of the families profiled. Those households without savings relied more heavily on credit, especially shop credit, borrowing from family and friends, and buying goods with installment payments, in order to meet their needs.

For example, in Oaxaca Household #7, "Rocío" borrowed from three different relatives as well as from the community when she needed additional money (Table 5). In Rocío's community, local indigenous leaders can provide interest-free loans to households in need, which are drawn from a fund made up of community dues. We did not observe a clear association between income and new borrowing, suggesting that Rocío's reliance on informal credit is opportunistic rather than well-timed in months with low income. Rather, she borrows when she sees her relatives, or when she senses that they have the capacity to lend to her.

In addition to relying on these informal loans to smooth consumption, Rocío also extends credit to customers who occasionally purchase Tupperware and coffee from her as a strategy for gaining control over her cash flow and having money to claim when she needs it. To do so, she sells her goods on credit and, in moments when she is short on cash, she goes around to her customers to collect their payments.

In Oaxaca, the remittance recipient households in our sample were more financially excluded, with very few using formal savings products. Four of the households in Oaxaca reported that they used no savings

[24] To learn more about savings groups, see Martín, X. *What are Savings Groups? The Evolution of Group Mechanisms for Savings and Credit.* Multilateral Investment Fund. Washington D.C., July 2014.

TABLE 5 ▶▶▶ Rocío, Oaxaca Household #7: Heavy reliance on borrowing from family and friends, US$

Month	Source of informal credit taken	Transaction (new borrowing or repayment)	Total debt balance, borrowing from family and friends	Income
April	Sister	($133)	($133)	$15
June	Cousin	($107)	($240)	$200
July	Relative	($33)	($273)	$60
August	Community support committee	($37)	($310)	$67
October	Cousin	$107	($203)	$0
November	Relative	$33	($170)	$36
November	Community support committee	$17	($153)	$36
Balance December			($153)	$0

instrument, formal or informal, throughout the course of the study. This is rare in BFA's experience with Financial Diaries data from around the world. Most households have at least some savings in the house at some point during the study. These families do not view money kept in the house as savings, as they plan to spend it imminently.

We attribute high levels of financial exclusion to the community's geographic distance from formal financial service providers and its robust community support system. The community has an uncommonly well-organized social safety net through a system of communal labor and a community leadership that provides financial support for families in need. In light of these unique community structures, demand for formal financial products may be lower here because households' needs are already being met by traditional informal practices.

In Puebla, the households made active use of financial instruments. The three households in Puebla conducted financial transactions in amounts equivalent to a large portion of their household income, both through informal and formal financial instruments (Tables 6, 7, and 8). For example, Puebla

TABLE 6 ▶▶▶ Puebla Household #1: Financial instrument transactions as percent of income

Financial instrument	Total value of transactions, US$	Total household income, US$	Percent of income mediated through financial instrument
Borrowing from ASCA	$400	$3,744	11%
Checking or current accounts	$140	$3,744	4%
Friends and family: lending	$68	$3,744	2%
Friends and family: borrowing	$875	$3,744	23%
Installment purchases	$187	$3,744	5%
Microfinance loans	$535	$3,744	14%
Saving in an ASCA	$33	$3,744	1%

TABLE 7 ▶▶▶ Ursula, Puebla Household #2: Financial instrument transactions as percent of income

Financial instrument	Total value of transactions, US$	Total household income, US$	Percent of income mediated through financial instrument
Consumer/ personal loans	$200	$4,399	5%
Credit cards (including store card)	$20	$4,399	0%
Installment purchases	$100	$4,399	2%
Keeping money (cash) at home	$477	$4,399	11%
Saving in ROSCAs	$273	$4,399	6%

Household #1 borrowed and repaid the equivalent of 23% of household income from family and friends over the course of the study period. The household combined the use of these informal borrowing mechanisms with formal credit products obtained from a microfinance institution.

Households relied heavily on a combination of informal financial instruments to maintain savings. In Puebla Household #2, for example, "Ursula" cycled the equivalent of 11% of household income through cash savings held at home, in addition to using a ROSCA to save.

Finally, those households who did report using bank accounts and formal loan products continued to rely on informal mechanisms in parallel to manage their finances. This suggests that in cases where remittance recipients actively use formal financial products, they are not seen as a substitute but rather a compliment to informal financial instruments that rely on social networks. For example, in the case of Puebla Household #3, "Graciela" borrowed the equivalent of 58% of her total net income from family and friends over the course of the study, while also using a formal consumer loan. Graciela saved and used the equivalent of 30% of her household's income as cash in the house, while at the same time saving the equivalent of 26% her household income in her checking account at the *caja*.

The significant amount of money from these households that passes through informal savings and credit instruments reveals an opportunity for formal financial institutions to add value by providing products and services.

TABLE 8 ▶▶▶ Graciela, Puebla Household #3: Financial instrument transactions as percent of income

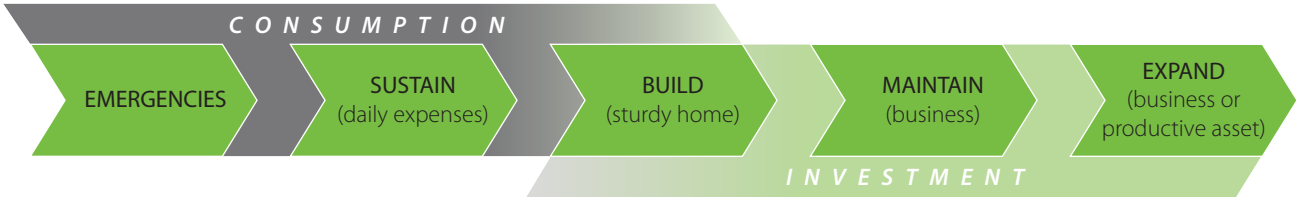
Financial instrument	Total value of transactions, US$	Total household income, US$	Percent of income
Checking or current accounts	$1,121	$4,299	26%
Consumer/ personal loan	$200	$4,299	5%
Friends and family: borrowing	$2,509	$4,299	58%
Informal credit at a store	$130	$4,299	3%
Installment purchases	$37	$4,299	1%
Keeping cash at home	$1,294	$4,299	30%

Families direct remittance income towards daily household expenses

Existing literature on remittances and household expenditures considers the use of remittances by recipient households using two broad categories: consumption and investment (see, for example, Adams and Cuecuecha (2010),[25] Cox and Ureta (2003),[26] and de la Briere et al (2002)[27]). Consumption refers to daily household expenses such as food or transportation, which account for the majority of spending among the households in our sample.[28] Indeed, in a 2013 survey of Mexican remittance recipients, 71.9% of respondents reported spending their remittances on eating and paying rent, preceded only by 74.4% who reported using remittances to pay debts.[29]

Although the observed sample was small, we see a progression of how remittances are used among our households that range from covering emergencies to making investments in human capital or business activities.

FIGURE 9 ▸▸▸ Stylized progression of uses of remittance income

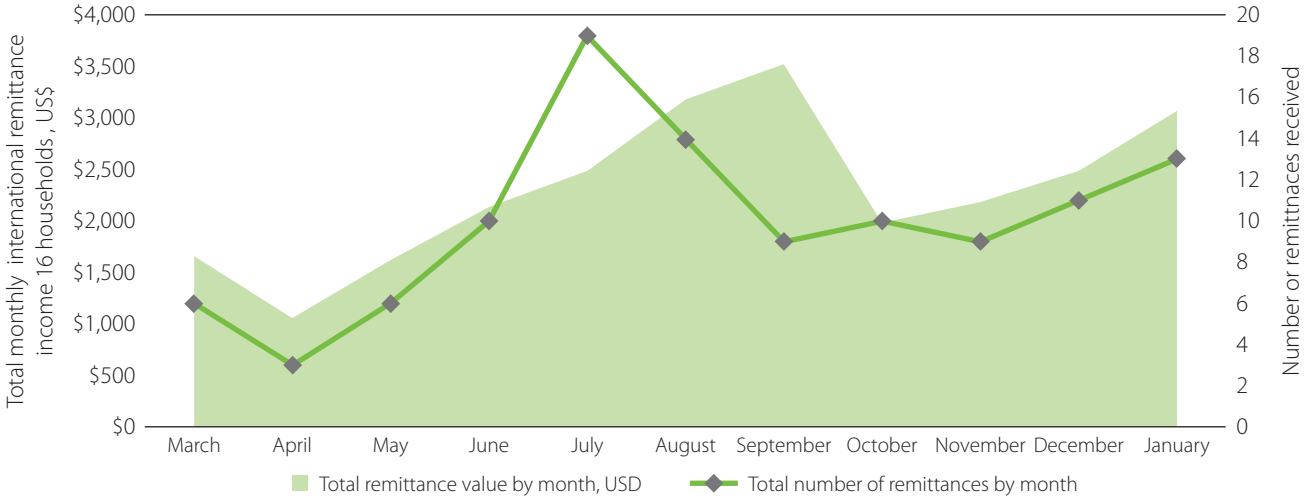


In our sample, remittance income helped families to cover the cost of food, utility payments, and to pay for expenses associated with children's education. Remittances increased at key times to cover education and holiday costs. Figure 10 shows the total remittance value added together from the 16 households on a monthly basis. Remittance payments increased between July and August when education-related costs are highest. There is another high point in December and January around the Christmas and *Día de los Reyes* celebrations.

In addition to education costs and end of the year festivities, cultural events are important to these families and may cause spikes in expenses. Remittance payments make participation in community activities possible when money is tight. For example, in Oaxaca Household #12, "Sofía's" five-year-old son "Eddy" was selected to be the *comandante* who carries the flag in the town's Independence Day parade, an important cultural milestone for which Sofía requested money from her husband "Luis," who is in the

[25] Adams, Jr., R., and Cuecuecha, A. "Remittances, Household Expenditure and Investment in Guatemala." World Development 38 (11): 1626-1641, 2010.
[26] Edwards, A.C., and Ureta, M. "International Migration, Remittances and Schooling: Evidence from El Salvador." Journal of Development Economics 72 (2):429–461, 2003.
[27] de la Briere, B., et al. "The Roles of Destination, Gender and Household Composition in Explaining Remittances: An Analysis for the Dominican Sierra," Journal of Development Economics in 68(2), ed., 309–328, 2002.
[28] The Financial Diaries does not track food consumption; consumption here refers to non-financial expenses.
[29] Encuesta sobre Migración en la Frontera Norte de México (EMIF NORTE), 2013, as cited by Fundación BBVA Bancomer, A.C. "Yearbook of migration and remittances Mexico 2015." Mexico City, December 2014.

FIGURE 10 ▶▶▶ Combined number and value of international remittances per month, 16 families



United States. We share more details about Sofía and Luis in Case Study 2. Luis works in construction and travels around Kentucky and Tennessee to different building sites. In response to Sofía's request, Luis sent MX$ 2000 pesos (US$ 133) in September. The cash flow reconciliation in Table 9 shows how Sofía spent the money from this remittance payment, including MX$ 100 (US$ 6.67) for Eddy's participation in the town parade. Sofía spent over 10% of the remittance payment on transportation and food on the day she collected it. The rest of the transfer was spent almost exclusively on food, electricity, repaying an informal debt, and other miscellaneous expenses.

TABLE 9 ▶▶▶ Sofía, Oaxaca Household #12: How Sofía spends her remittance payment

Total remittance money received on September 5, 2015	MX$ 2000	US$ 133
Outflows	**Pesos**	**US Dollars**
Transport to collect remittances in the city (return trip)	$100	$6.67
Lunch and snacks for Sofía and Eddy in the city	$150	$10.00
Soap, laundry detergent, toothpaste	$200	$13.33
Soup, rice, oil, sugar	$100	$6.67
Fruits and vegetables	$200	$13.33
Repayment of credit at the local shop	$40	$2.67
Eddy's outfit to be the comandante for Independence Day	$100	$6.67
Electricity bill	$50	$3.33
Milling of corn (MX$ 4 every four days)	$24	$1.60
Food for her son at school (MX$ 20 every day)	$280	$18.67
Total expenses	**$1244**	**$82.93**
Money remaining as of September 21, 2015	***$756***	***$50.40***

Sofía tries to make the remittance payment last, keeping as much as possible at home to be spent down slowly on food, as she is not sure exactly when Luis will be able to send more money.

The fact that remittances are largely used for consumption and meeting basic needs—including food, medicine, and education—rather than on investments in productive assets does not belittle their impact in improving quality of life for these families. According to interviews with recipients, remittances have an important and transformative impact for their families by allowing them to endure crises and increase their standard of living, even if the family may not have physical assets to show for this. Moreover, spending on healthcare, better quality food, and educational expenses make important contributions to improving human capital in these households.

Remittances can act as an insurance mechanism for recipient households

Remittance recipients in both Oaxaca and Puebla report that the ability to ask for money in emergencies is a major advantage of having a relative in the United States. In phone interviews, the migrants themselves told us that they do not have much surplus from their paychecks to send back home, given the high cost of living in the US. However, in the case of illnesses, accidents, or other emergencies, migrants do seem to be able to mobilize funds to send some money home. As Marisol of Oaxaca Household #4 said:

> *"It would be difficult [to live without the support of remittances from my brother]. When there is no work, when I have an emergency, I know I can count on … my brother. [But] when you don't have a family member in the US you don't have anyone to turn to for money."*
>
> **▶▶▶ Marisol, Oaxaca Household #4**

Households we spoke with asked for money urgently for various emergencies during the course of the study period including: dental work for a son; medicine; doctor and pediatrician visits; paying for damages after a car accident; and hospital treatment after a family member fell from a construction site. The money sent in these cases acted as a kind of insurance that pays out when crises strike, and was indispensable, according to these households. But naturally these funds are useful for covering other needs as well. Rocío in Oaxaca described how money sent for her sister's illness also enabled the family to pay electricity bill:

> *"We told [my father] that my sister was sick, and he sent us money. Of these funds, we took some money for electricity and gas, because if not we wouldn't have had the money. We would have had to borrow to pay for electricity."*
>
> **▶▶▶ Rocío, Oaxaca Household #7**

In phone interviews, some migrants mentioned that they would like to send more money home, but it is difficult to do so. At the time of being asked for money for an emergency, migrants likely top up the payment if they can because they know their family members in Mexico face urgent needs.

Although households ask for money from relatives in the US in emergencies, they also try to save for these situations, such as needing money for transportation and to pay a doctor if a child gets sick. As one respondent described:

> *"I am thinking, if I could save … you know, one can't always count on good health. All of the sudden someone can get sick, and having money on hand, you can just take it and go to [the nearby city] to buy medicine, go to the doctor … but if you do not have savings and someone gets sick, then how will you get by?*
>
> ▶▶▶ **Oaxaca Household #9**

In the next section, we discuss the main drivers and motivations for savings for households in the sample.

Housing, education, and preparing for migrants' return are the main motivations for saving.

Small and irregular as remittances payments are, some families do manage to save from these payments. Among the households we interviewed, a primary motivation for saving is to build a better home or expand or remodel an existing family home. Migrants who plan to return to Mexico aspire to build a comfortable house of their own to come back to. Buying land is also an essential first step before being able to build a family home.

Q: "Why would you like to save? With all the ways you save, what are you saving for?"

A: "For construction [to build my house], to buy animals and fatten them [for sale]."

▶▶▶ **Respondent in Puebla, not from the original Financial Diaries sample**

"We built this kitchen five years ago, the kitchen we had was small, [and with remittance payments] we built this [bigger] kitchen."

▶▶▶ **Oaxaca Household #9**

"These are my savings that will be useful at some point, I don't know, to remodel the house, or not necessarily to build a house, perhaps to add more rooms. Or they could be for an illness, there can be many emergencies."

▶▶▶ **Oaxaca Household #1**

One family that participated in the Financial Diaries study in Oaxaca, but only began receiving remittances after data collection had concluded and is thus not included in this analysis, received a MX$ 20,000 (US$ 1,333) contribution in August from her husband in Florida in order to buy bricks and other construction supplies in August 2015. "Luciana" collected the money and diverted all of it directly to invest in construction materials. Families may also buy bricks and other supplies piecemeal as their small remittance payments allow. The cost of labor for construction often requires a bigger lump sum, according to these families, and saving up is likely required to cover the cost of contractors and construction workers.

Interestingly, for these families there seems to be a difference in the way that they perceive the terms "saving" and "investment," providing insight into the way that remittance recipients mentally account for the funds they receive. Families tended to talk about putting aside resources with the goal of eventually building or improving a home as an "investment" rather than "savings," which is a term respondents seem to apply to smaller, "just in case" funds. This is an important distinction that may be relevant in marketing savings products to remittance recipient households.

Several remittance recipient families in the study group demonstrated an interest in saving from remittances to start a business, or used contributions from remittance payments to maintain a current small business. For example, in Puebla Household #3, Graciela and her son Miguel, who is working abroad in California, achieved their goal of opening a grocery store in the family home due to collaborative saving behavior (Case Study 1). In Oaxaca Household #12, Sofía dreams of opening a clothing store (Case Study 2). However, since her husband had migrated fairly recently at the time of the Financial Diaries study, she is still caught in a cycle of trying to keep up with daily household expenses and says that achieving the goal of opening her store seems to be a long way off. In practice, the Financial Diaries households tend to rely more on credit than on savings, including for investments in starting a business. Perhaps this is because larger loans or loans pieced together from multiple sources seem more attainable in the short run than saving the equivalent of many months of income over time.

Children's education, which gets progressively more expensive with each level of schooling in Mexico, is another priority for remittance recipient households. Among the families with school-aged children in this sample, money received from remittances was paid to schools soon after it is received, rather than requiring the accumulation of a larger sum. As is the case for many people around the world, Mexican families see investment in education as a fundamental step to offering children a better life. Families may also consider it to be a mechanism to ensure sufficient financial support from adult children after retirement (Case Study 4).

Intrahousehold decision-making surrounding these saving and investment preferences can be complicated by the fact that families are split between two different countries. In this small sample, we found that migrants largely leave spending and savings decisions to the remittance recipients back home in Mexico. In response to the question, "How often do you participate in making financial decisions with your family in Mexico?" most responded "rarely" or "never". Migrant remittance senders also reported that, in general, they do not verify that money has been used for a certain purpose once it is sent, as they trust that the recipient uses the money well.

We observe some division of labor around the responsibility for financial decision-making that may be more of a general trend in gendered patterns of money management than a specific characteristic of transnational households. In these households, men who have migrated seem to leave managing daily expenses for food, education, and health to the women—in this case their spouses, mothers, or sisters in Mexico. We did hear of some collaboration, however. For example, Case Studies 1 and 4 describe two households in which migrants work together with remittance recipients to achieve common financial goals. In the next section, we present more details about four of the remittance recipient households.

CASE STUDIES

CASE STUDY 1: Graciela
A mother and son coordinate to start a business and save through complex instruments across borders

Graciela lives in Puebla Household #3, and is a strong character that holds her family together. She lives with her husband and their 17-year-old twin daughter and son. Another son, Juan, works as a policeman in the same town; Juan married and started his own household after the Financial Diaries study had concluded. Graciela's oldest son Miguel migrated to the United States in 2001 when he was 18. At the time, he and his mother worked together in a sewing factory, and Miguel saw that it was difficult for the family to make ends meet. Miguel first traveled to Los Angeles, where his *coyote,* the smuggler who helped him cross the border into the US, had connections. He later traveled to northern California, where he was without work for nearly a year and went deeply into debt. He finally obtained a job with a cleaning service, where he worked for six years before transitioning into construction. He now earns US$ 11 per hour and is paid every two weeks in cash.

Although 39% of their household income came from remittances, Graciela's family relied on 10 sources of income throughout the Financial Diaries study. Juan's regular salary as a policeman contributed another important portion of their household income (Figure 11).

Graciela and her family stand out in the sample for being active users of financial services. They managed fourteen financial instruments during the Financial Diaries study, including five bank accounts (Table 10). This family holds four accounts with the local *caja*, and one account with a large Mexican bank that has a branch located about one hour away from the community. Graciela uses two of these accounts to save for the twins' education, and uses another savings account to deposit part of her remittance payments from Miguel on his behalf. Graciela says she is the one who encourages Miguel to save, saying, "The initiative is mine." Miguel rarely gets involved in his mother's decisions, although they usually talk three times a week. Miguel believes that the best way to save is in a bank account in Mexico.

FIGURE 11 ▶▶▶ Graciela, Puebla Household #3: Percentage of income from different sources over 10 months, USD

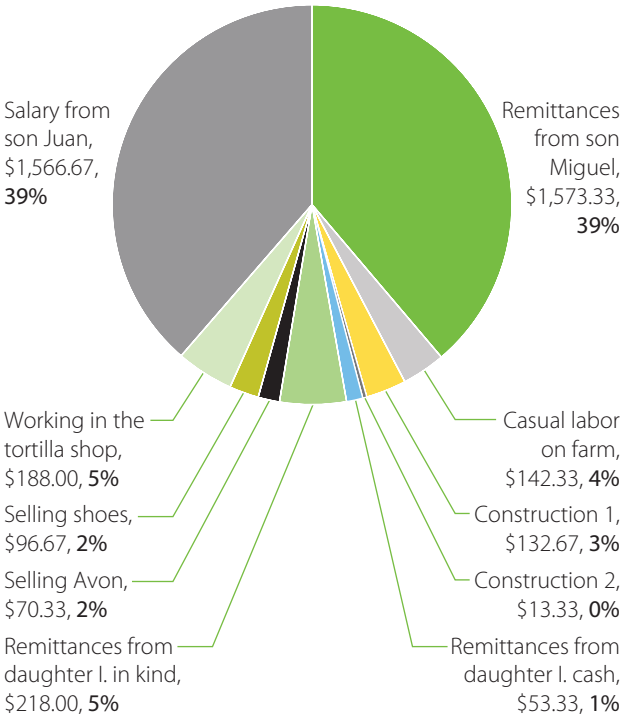


TABLE 10 ▶▶▶ Graciela, Puebla Household #3: Graciela's family's financial instruments

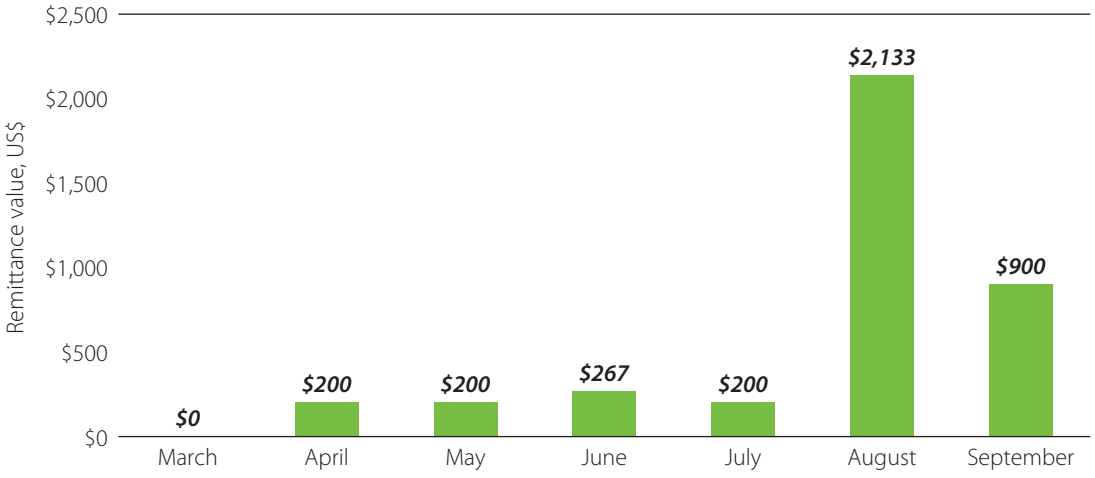
	Financial instruments—Graciela's family
1.)	Bank account #1 Basic account *Caja*
2.)	Bank account #2 Savings account *Caja*
3.)	Bank account #3 Children's account for daughter *Caja*
4.)	Bank account #4 Children's account for son *Caja*
5.)	Bank account #5 Current account, large commercial bank
6.)	Savings in the house
7.)	Loan #1 from *Caja*
8.)	Credit at the shop- Irene
9.)	Installment purchase- shoes
10.)	Loan from her son Juan
11.)	Loan from friend
12.)	Loan from son Gilberto
13.)	Loan from son Miguel in US
14.)	Loan from cousin

Miguel sends money to three different households in Mexico (another brother who does not live with his mother, and a former girlfriend, in addition to Graciela). He says that he is also often asked to contribute when family members are sick, or in the case of other emergencies. For example, he sent MX$ 10,000 (US$ 667) pesos when his other brother fell from a construction site and had medical expenses.

Miguel sends money through MoneyGram that is paid out at Elektra, a large chain of Mexican appliance stores. He prefers this option because it is closest to his house. This means his mother travels about one hour and pays MX$ 38 (approximately US$ 2.50) round trip to collect the remittance payments that Miguel approximately every two weeks. Although the local *caja* pays remittances, Miguel knows the system he uses well and he does not want to look for another provider that connects with the *caja* on his side. He thinks this would be time consuming. Remittance senders like Miguel make decisions about which service to use and where to send money. The migrants we spoke to are afraid to travel or seek out information, limiting their options. Consequently, Graciela performs the necessary operation in two steps: she collects her remittances in Elektra and then makes an extra trip to the *caja* to make deposits to her savings accounts. She does not complain about traveling to the nearby town, as she usually has other errands to run there.

Graciela's main motivation for saving is to make Miguel's eventual return to Mexico as comfortable as possible. She and Miguel spent many hours on the phone together making plans to set up a small grocery store. Graciela had this idea in response to Miguel's comments that he would like to come

FIGURE 12 ▶▶▶ Graciela, Puebla Household #3: Remittances from Miguel, March–September 2015



home, but he doesn't know what job he would do. She also feels guilty that he sacrificed so much to go live alone in the United States. This feeling of guilt about the migrant's sacrifice, and the pain of such long separations, was evident among many respondents. These emotions influence how transnational families communicate about money.

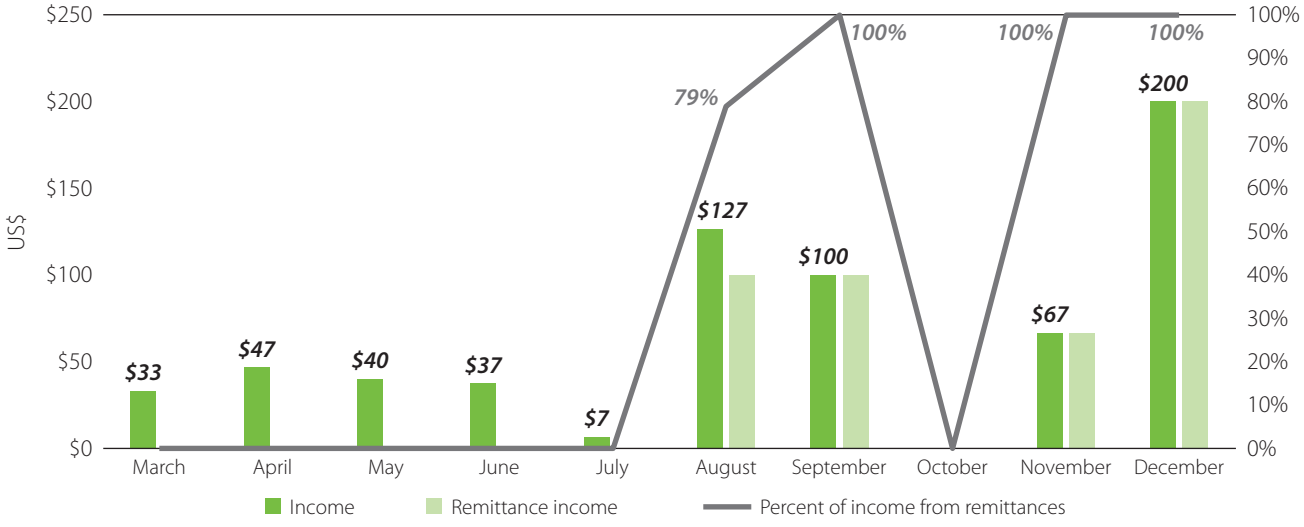
Miguel managed to save over US$ 2,000 in cash at home in California, which he then transferred to his mother in August 2015 (Figure 12). She collected this money and right away bought wholesale groceries, a cash register, a counter, and other supplies to start up their grocery store on the ground floor of their family home. Through their combined saving and financial planning, this family was able to start the small grocery store, thus adding another important source of income to the household.

CASE STUDY 2: Sofía
Requesting money for daily expenses and special events in Oaxaca

Sofía is 32 years old, but looks younger; she is energetic and stylish, often sporting a fedora. We met her at the primary school in the community for the interview, where she does needlepoint as she waits for her son to be released from kindergarten. Sofía's son Eddy is five years old, and they live in Oaxaca Household #12.

Sofía and her husband Luis, age 33, jointly made the decision that Luis should go to the US knowing it was going to be difficult to support their son given the scarce opportunities for work and reliance on subsistence agriculture in their village. Luis left in May of 2014 and found work a few months later. Remittances did increase household income dramatically: when Luis migrated and started sending money in August of 2015, their average household monetary income, not including agricultural production that is consumed, nearly tripled from MX$ 492 (US$ 33) an month to MX$ 1400 (US$ 93) (Figure 13). Her expenses also increased from an average of US$ 25 in spending per month before Luis migrated to US$ 78 per month after migration.

FIGURE 13 ▶▶▶ Sofía, Oaxaca Household #12: Sofía's monthly household income, USD



In addition to receiving remittances from her husband, Sofía does casual labor on community members' farms. She sometimes works by *la guesa*, or labor exchange (see Section 2A), instead of getting paid in cash. She does this to ensure that she will have enough help harvesting her own corn via reciprocal community labor, since her husband is in the US and cannot help her. When Sofía does agricultural work for cash instead of labor exchange she receives MX$ 50 to MX$ 60 (US$ 3.30–$4) for a day of work.

When Luis left, the trip cost between MX$ 50,000 – 60,000 pesos (US$ 3,333 – US$ 4,000). Luis borrowed the money from two different members of his extended family, and he needs to make payments to repay them in addition to sending money to Sofía. Networks around remittance corridors are tight: Luis lives with his nephew, and still interacts with people from his community who now live in the US. For Luis, life in the US is transient and full of interruptions. His employer sends him and his construction team to different sites around Tennessee and Kentucky depending on where the large jobs are. This has implications for channels that Luis uses to send money, as he has to find a new place to send money each time he moves.

Sofía's main challenge in collecting remittances is the cost and time it takes to travel to the nearest town to receive her payment. Sofía spends MX$100 (US$ 6.67) for the round trip taxi fare. She always collects her remittance payment at a large commercial bank, but the line can be long and the trip takes her at least half a day.

Sofía is motivated to save: she dreams of opening a small clothing store. Occasionally she manages to put aside MX$ 500 (US$ 33) from her day labor and remittances by storing cash in her home, and maintaining a commitment to saving is important to her. Sofía says her strategy for savings is to trick herself into thinking she does not have money: "*Think of it like there is nothing there.*" Although Sofía saves small amounts in the house, her savings did not increase significantly after Luis migrated. However, after Luis went to the US she was able to repay the shop owner from whom she had taken goods on credit. She was also able to get a loan for MX$ 10,000 (US$ 6,667) from her brother.

Another more somber reason that Sofía is motivated to save is the possibility that something may happen to her husband, for example, if he has an issue in the US or is deported. *"[I save] for anything, in case of any emergency, or what if in a little while they could catch my husband and send him back here, and with what …? That is, to sustain us, the little that we could."*

In addition to protecting against potential future emergencies, Sofía's savings also contribute to consumption smoothing in the household. Luis's work is irregular and Sofía has had to dip into her savings when her husband doesn't manage to send money: *"It is difficult because sometimes I don't have any [money], and my husband can't send me anything. There are times when he can't send me money when I need it, and I have to withdraw it from my savings."*

CASE STUDY 3: Marisol
Irregular remittances payments from a brother

Marisol lives with her husband and their three-year-old daughter in Oaxaca Household #4. The couple works on their farm and does odd jobs when possible. Marisol counts on support from her brother "Edmundo", who is working in construction in North Carolina, to cover basic expenses like food, clothes, and school fees. However, Edmundo manages to send her very little money, and only sporadically (Figure 14). Edmundo also sends money to their other two siblings and their father, showing that some remittance senders may be responsible for supporting many different people back in Mexico.

Q: "When [your brother] left, did you discuss how often he would send money?"

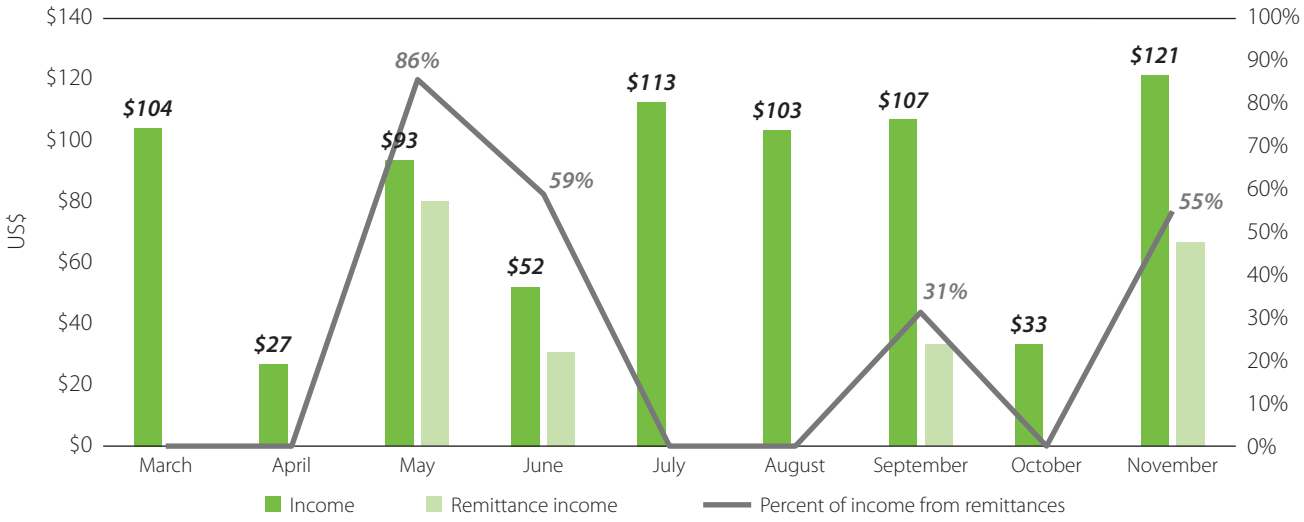
A: "No. When he first arrived [in the US] he used to send money every month, and then he began to send every six months, every eight, and that's how the time kept extending."

Q: "And why do you think it changed?"

A: "He says it is because there is no work."

The high cost of living in the US also limits the funds available to send regular remittance transfers. Edmundo cannot identify the name of the remittance company he uses and only knows the place where he sends money as the *tienda mexicana* (Mexican store). He prefers to use this channel because it is nearby and he does not have a car. He finds the fee of US$ 10 to send US$ 100 to be expensive. Edmundo says that the major challenges he experiences in sending money are the trip to the t*ienda mexicana*, the store's limited hours, and the difficulty he has communicating with his family because there is no cell phone service in their community.

FIGURE 14 ▸▸▸ Marisol, Oaxaca Household #4: Marisol's monthly household income, USD



Edmundo does not have a bank account in the US or in Mexico. He reports that he does not have much money to send remittances due to the seasonality of his job and the high cost of rent. He says he is not saving at the moment because, "*What I earn isn't enough. I have many expenses in the US.*"

Marisol also struggles to save because of the small emergencies that come up, such as her daughter getting sick. She says:

Q: "Do you save at home for everyday expenses?"

A: "Yes, I save a little, but I always spend it quickly … about twice I have succeeded in saving."

Q: What happened those times you were trying to save?

A: "My daughter got sick and I spent the money on medicine."

The infrequency and irregularity of remittance payments among some Mexican families present a challenge for automatic savings contribution products. In these cases, discretionary savings towards specific goals may be more effective.

CASE STUDY 4: Anita
Migration to finance son's education as a long-term plan for family income

"Anita" is a tough but soft-spoken woman who gives the impression of being calm and self-assured. She says that she and her husband make every sacrifice to fund their sons' education so that they will have better opportunities. Anita has now returned to her village in Oaxaca after spending about five years in the US, and is the head of Oaxaca Household #11. Anita and her husband "Francisco" returned to Mexico so that their children would graduate from the Mexican school system, which they thought would be beneficial for them being able to work in Mexico. Anita recounted her experience of migration:

> *"Oh, we had an adventure on the other side [in the US] … I went with my children. We tried to cross three times. The first time the van broke down, the second time we fell in the hands of the border patrol, and the third time we passed. [My sons] were 10, 8, and 6 years old … [We spent] one night and half a day walking. We arrived to find work, to find a school for our sons. We needed someone to interpret as we did not speak English."*

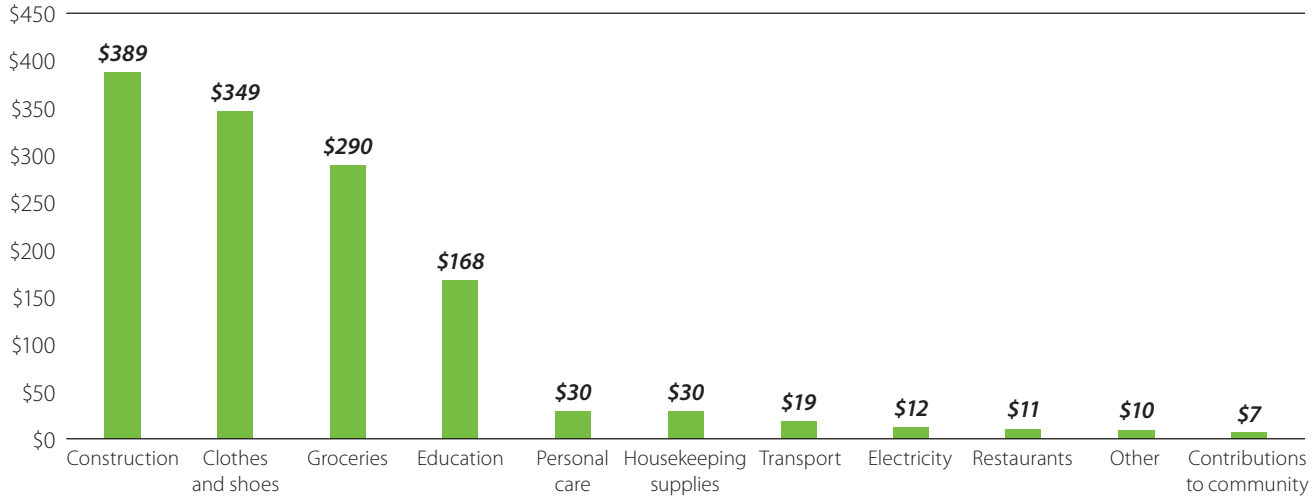
Currently, her husband Francisco has returned to Kentucky where he is working in a bakery. He traveled back to the United States because he was selected into a year of unpaid labor for the community (locally called *la guesa,* see Section 2A), creating additional financial strain on their family at a moment when their 18-year-old son Pablo was just starting medical school. According to his mother, Pablo is studying in a top program in Ciudad Juarez. Francisco and Anita decided that she would take on the position in the community instead of Francisco, as substitution within the household is allowed, and Francisco would return to the US and send money for medical school. Francisco crossed into the US again in November of 2014. He plans to stay for at least five years to pay for the entirety of his son's medical school. As intergenerational financial support is common in Financial Diaries households, it is understood within the family that if Francisco contributes to Pablo's education, Pablo will in turn support his parents financially in their retirement once he is working.

In addition to receiving remittances, Anita receives *Prospera*. Before Francisco migrated, *Prospera* accounted for about 90% of monetary household income, although Anita worked on other people's farms and wove hats that she sold to supplement this income. This family also derives a large portion of their food from the family farm.

During the Financial Diaries study period, Francisco and Anita dedicated 13% of all household expenditures to education, and 30% of all expenditures were related to construction to expand their home (Figure 15). Since Pablo is just beginning medical school, his education expenses are likely to increase.

Like the other remittance recipients in Oaxaca, Anita's biggest pain point is the amount of time and cost required to collect her payment. She has to travel and spend MX$ 70 (US$ 4.67) on round trip transportation to pick up her remittance, which can take at least three hours. Although there is now a

FIGURE 15 ▶▶▶ Anita, Oaxaca Household #11: Total household expenses over ten-month period



caja in her community that could allow Anita to receive remittances without taking this time consuming trip, previous local banks that have come to the community have failed, destroying trust in financial institutions in the area. Anita says, "*The truth is, I don't have confidence in the bank. Here many people lost money with the previous caja, now I don't trust banks.*"

Anita recognizes that she has benefitted from receiving remittances, allowing her to make investments in her son's education as well as in a new home built from better quality materials. Moreover, another benefit she mentions is that it is easy for her to borrow money now because the community knows that she has a way to pay back loans through remittances. Anita regularly took food on credit from two stores during Financial Diaries, with an average purchase value of MX$ 105 or US$ 7.

Francisco is paid in cash every week. He sends remittances from the *tienda mexicana* near where he is living. He chooses a large Mexican commercial bank for his wife to collect money in the nearby town because this bank has the best exchange rate. He says that he pays US$ 10 to send money each time he sends money, which he feels is reasonable. Francisco tries to get money to his wife and son as quickly as possible, as he thinks it is best to save in Mexico rather than in the US. Although Anita does not have a bank account—she says she does not trust banks—she and her son save in the house from Francisco's remittance payments.

In speaking about the most recent time she received a payment from her husband, Anita shared, "*Studies are the most important, that is why [Francisco] sent money, to buy [Pablo's] shoes, his uniforms, his books, that is why he keeps sending money.*"

TABLE 10 ▶▶▶ Anita, Oaxaca Household #11: Anita's monthly remittance income in months following Financial Diaries

January 2015	MX$ 8100 (US$ 540)
February 2015	MX$ 3000 (US$ 200)
March 2015	MX$ 2000 (US$ 133)
April 2015	0
May 2015	MX$ 2500 (US$ 167)
June 2015	0
July 2015	MX$ 2000 (US$ 133)
August 2015	MX$ 3500 (US$ 233)
September 2015	MX$ 2500 (US$ 167)

RECOMMENDATIONS: HELPING TRANSNATIONAL FAMILIES TO PROTECT, INVEST, AND GROW ▶▶▶

The following section describes recommendations from the Financial Diaries study for financial institutions and other remittance service providers looking to serve remittance recipients in Mexico and beyond.

Expand payment options in underserved areas

There is a paucity of formal financial service providers in both communities included in this research. Remittance recipients in the small town in Puebla must travel about one hour, taking two *combis,* or minibuses, in order to pick up cash remittance payments that are sent anywhere other than to the one *caja* that is located in their town. Similarly, in the rural Oaxaca community recipients take an expensive taxi to the nearest town to collect payments. This expense is significant: Sofía, described in Case Study 2, spent 5% of her remittance payment on this transportation alone.

This lack of options is not unique to these communities. A national financial inclusion survey carried out in 2012 found that 29% of municipalities in Mexico do not have any financial service access point, including bank branch, ATM, agent, or POS device.[30] Across rural Mexico, coverage of ATMs, bank branches, and even correspondent bank agents remains sparse. While some money transfer operators do offer significant geographic coverage, there is still unmet demand in smaller, more remote communities.

The scarcity of POS devices in many of these communities also presents challenges for the use of remittance funds once they have been received. Families included in this research used the lion's share of their remittance income to cover basic needs of the household, especially education, healthcare, and utilities. If the vendors providing these products and services are not able to accept

[30] Instituto Nacional de Estadística y Geografía. "La inclusión financiera en México: Resultados de la encuesta." Encuesta Nacional de Inclusión Financiera. Mexico City, September 2012.

electronic payments, remittance beneficiaries are forced to receive and hold the bulk of their remittance income in cash. Keeping cash on hand presents challenges for household budget management and is less secure than keeping it in a formal bank account linked to a debit card for purchases. Although low-income households are somewhat price sensitive to fees, tapping into these large pools of cash tied up in informal instruments presents an opportunity for financial service providers.

Technology and the expansion of banking and payment agent coverage can help solve this problem.[31] However, in some parts of Mexico, including the mountainous Mixteca region of Oaxaca where we did our research, lack of cell phone service and internet access is a fundamental problem that must be solved by communications companies, perhaps with government incentives, before technology-enabled financial services can take off. Despite these challenges, payment services providers that are able to serve the rural market close to home stand to capture a large and important new market.

Increase options for direct payment of goods and services

Providing options for remittance senders to more easily make direct payments of goods and services from abroad may make these payments more efficient. For example, in their efforts to build or improve a family home, one migrant in our study was making direct payments informally to an individual construction contractor who also bought bricks on his behalf. Products that formalize direct payments from migrants to pay for utility bills, construction materials and services, or telephone airtime top ups, are all areas where financial product solutions would benefit migrants and businesses alike.

Remittance-linked credit products could facilitate investment and reduce household vulnerability

The study found demand among remittance recipients for credit products, especially for investments in microenterprises (for example Graciela in Case Study 1) and housing. It is notable that the majority of participants own real estate, suggesting that there could be a market for home improvement credit products. The study also observed a demonstrated demand for small dollar consumer loans to smooth consumption in the case of irregular income or unexpected expenses. Families who receive international remittances report that they are better positioned to come up with money for an emergency than those who do not have a family member in the US. However, relying on remittances for emergencies is not an impregnable strategy for these families as their relatives in the US may be unreachable, or they may not be able to come up with the money fast enough. Indeed, the households we observed employed a combination of financial tools in the case of emergencies or unexpected expenses in addition to remittance income, including formal and informal credit and savings instruments.

[31] See Multilateral Investment Fund, "Banca corresponsal e inclusión financiera: modelos de negocio en América Latina." Washington DC: September 2013.

One of the biggest challenges faced by remittance recipient households in this study was income volatility. Financial products that use innovative ways to leverage remittances to provide safeguards for families against emergencies would add value to these financial flows and reduce the economic vulnerability of these families. For example, small emergency loans guaranteed by the account into which remittances are received, similar to Safaricom's M-Shwari product in Kenya, is one innovative model that could be replicated in Latin America. Programmed savings products linked to remittance transfers could also relieve pressure on remittance senders to come up with extra money on short notice in the case of an emergency.

Many credit providers in the region already factor remittance income into lending decisions, and some have developed credit scoring tools based on remittance flows.[32] While leveraging remittance flows for credit scoring stands to benefit both remittance senders and recipients, it is important to remember that remittance income is just one of many sources of income for these families. The households included in this study relied on an average of 6.6 income sources. For one family in Puebla, international remittances were just one of 13 income sources. Credit scoring algorithms may need to take into consideration more than remittance inflows to get an accurate picture of the income and repayment capacity of these households.

Income, including remittances, is irregular. Because of this, flexible savings may be more appropriate than rigid commitment savings products

We observe that monthly income fluctuates significantly, and remittances exacerbate, rather than smooth, this volatility for remittance recipients. When remittance income does arrive, most, if not all, of this money is already earmarked for food, education expenses, transportation, and other everyday needs. Alternatively, the recipient may have asked for money for a specific purpose, such as a medical emergency or in order to be able to take advantage of a specific opportunity.

Although households report that they would like to direct a portion of remittances towards savings, uncertainty about how much remittance income they will receive and when, as well as uncertainty surrounding unexpected expenses that may arise, make it difficult for recipients to commit to a set monthly savings contribution ex ante. Although the literature suggests that pairing commitment savings products or automated deposits with remittances could be an effective way of generating long term savings habits,[33] our research shows that flexible savings contributions may be a better match for the way families receive income. Respondents did say that the habit of contributing to savings, enforced by savings groups for example, is helpful. Products that incentivize voluntary savings contributions from each remittance payment, no matter how small, may help to foster this behavior while still granting households flexibility. Institutions should also experiment with the use of illiquidity as a commitment mechanism, being sure to allow clients immediate access to their funds should the need arise.

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[32] For example, Banco Unión in the Dominican Republic

[33] See Ashraf N, Karlan D, Yin W. Tying Odysseus to the Mast: Evidence from a Commitment Savings Product in the Philippines. Quarterly Journal of Economics. 121:635-672, 2006.

Products and messaging using the concept of "investment" may have more resonance than the concept of "savings"

When discussing motivations around savings, Financial Diaries households say that just putting money as precautionary savings seems difficult if not impossible, given the many expenses they have. When speaking about savings, many respondents sounded more defeated than motivated. As Rocío described:

> *"I am not a good saver. Sometimes I make money, $100 or $200 pesos, but with the kids and school-related expenses, it's gone. … I am just not a good saver."*
>
> ▶▶▶ **Rocío, Oaxaca Household #7**

Despite her disparaging attitude, Rocío was in fact saving in the house and buying building materials. In contrast to general "savings," "investing" money in a business or build or improve one's home sounds more appealing to clients. Although we know that savings and investment are one in the same in economic terms, sitting on the same side of the balance sheet, our research found that these low-income Mexican households do seem to make a distinction between the two. Liquid savings products that can simulate the illiquidity of the purchase of a physical asset, for example construction materials, could provide the same commitment device that respondents seem to prefer. Labeling savings products with the final goal of the saver can also leverage the goal-setting and mental accounting behaviors of the households to incentivize savings. The advantage to replicating this behavior using liquid and semi-liquid formal financial accounts is that families will be able to draw down cash in the event of an emergency, while still working toward a larger investment goal.

Financial service providers should also take care with messaging in communications and the advertising of savings products. Respondents in the sample demonstrated a lack of self-confidence around their ability to save. Institutions should communicate that savings can yield productive results, even for people in their economic situation. The concept of investment may resonate more among these households than savings.

Policymakers and consumer advocates can do more to help consumers make decisions about financial institutions

Our sample reported high levels of distrust of banks and other financial service providers. With many credit union failures in recent years, people are right to be wary: Mexico's financial consumer protection agency (CONDUSEF for its initials in Spanish) reported in July 2015 that 69 *cajas,* nearly 10% of all small *cajas* in Mexico, had failed or were otherwise legally unfit to accept deposits.[34]

Although there is a *caja* in the Oaxaca town where we carried out interviews, it is only one of two branches, and residents do not trust it because of past experience. As respondents in Oaxaca said:

> *"It is common that these cajas disappear. That is why I can't trust banks. Sometimes people save a little at the caja, and at the end, no, no they are left with nothing."*
>
> ▶▶▶ **Sofía, Case Study 2**

> *"The truth is, I don't have confidence in the bank. Here many people lost money with the previous caja, and now I don't trust banks."*
>
> ▶▶▶ **Anita, Case Study 4**

Unauthorized institutions present a legitimate risk to clients.

[34] See for example: Hernández, Antonio. "Condusef: 69 cajas de ahorro en la quiebra o inhabilitadas." El Universal July 10, 2015.

In order to empower clients to make better financial decisions, consumer advocates in Mexico should make it easier for clients to assess the validity and level of government oversight provided to financial service providers. One idea is to implement recognizable stickers and logos that would identify financial institutions that are authorized to operate and supervised by the CNBV, as well as those institutions offering deposit insurance. An accompanying information campaign would be needed for clients to be able to recognize these symbols and understand their implications.

Because of high levels of distrust, legitimate service providers will also need to do more to win the confidence of their clients. Our initiation research suggests that being proactive about explaining government backing and deposit insurance, as well as being transparent about fees and terms and conditions can help achieve this goal. However, providers may wish to carry out market research to understand which messages resonate with clients in building trust, which is culturally dependent. Winning the trust of remittance receiver clients will be fundamental for both uptake and usage of any additional products.

Financial institutions that pay out remittances can do more to communicate information about options to migrant customers in the United States

On the remittance senders' side, our respondents reported that they usually do not shop around or compare options for sending remittances. From phone interviews, it seems this is due to constraints on mobility and fear among undocumented migrants in our sample. One study participant from Oaxaca who had worked in North Carolina and Florida recounted his fear of going further than necessary to send remittances:

> *"It is rare that you find a shop that can make remittance payments near where you are. There are some, but they did not have a relationship with the bank near where my wife lived in Mexico … So you [have to] travel more than an hour to deposit [send] your money, and you run the risk that one the way the police or migration authorities stop you, and forget it!"*

Migrants report that their main source of information about options for remittance payments and other financial services is from the other Mexicans they work with. Financial institutions seeking to work with this segment should make efforts conducting marketing targeting remittance senders abroad in order to communicate information about the money transfer operators (MTOs) with which they work. Maintaining up-to-date market research on the geographic locations and labor trends of their migrant populations will allow financial institutions to strategically select MTO partners that offer points of sale closest to their target markets. These efforts can translate into larger volumes of remittances intermediated through the financial institution on the payout side, creating the opportunity to cross-sell products and services at scale.

Remittance flows are an important source of income for millions of families throughout Latin America. Improving the transfer process and offering add-on products presents a compelling opportunity for service providers. However, data from 16 Financial Diaries households show that the patterns and size of these flows varies, and differs from a regular monthly pattern that we might expect. Understanding remittance recipients, through both analysis of supply side data and market research with consumers, can help providers make breakthroughs in serving remittance senders and recipients effectively.

ANNEX A

ADDITIONAL INFORMATION ON MEXICO FINANCIAL DIARIES

Financial Diaries Methodology

The Financial Diaries methodology developed by Bankable Frontier Associates (BFA) requires researchers to interview participating families every fourteen days about all of their financial activities and the events in their lives that affect their finances. Daryl Collins and co-authors developed this approach to tracking financial behavior quantitatively for the book *Portfolios of the Poor*.[35] In these interviews, trained enumerators ask about all income, expenses, and transactions in financial devices held by household members by logging information using a tablet in real time.

The research begins with three comprehensive initial questionnaires, applied over the course of two months, which record basic information about each household. After the initial questionnaires, we begin the Financial Diaries interviews that record all household cash flows longitudinally over 11 months in the case of Mexico. In each interview, researchers also record qualitative observations about life events affecting each family. This complementary qualitative information helps give context to the transactional data. Throughout the Financial Diaries process, researchers gain the trust of the families, and after some time, the respondents feel comfortable sharing details of their financial and personal lives.

FIGURE 16 ▶▶▶ Timeline of Mexico Financial Diaries

[35] Collins, D. *Portfolios of the poor: How the world's poor live on $2 a day*. Princeton: Princeton University Press, 2009.

One important advantage of this methodology is that we observe the ups and downs that families participating in the Financial Diaries study face over time. We can therefore ground our assessment of financial needs and gaps in respondents' portfolios in the real crises and struggles that matter most for these families.

Selection of field sites

With input from BANSEFI, BFA and its partner in Mexico GESOC A.C. selected three communities for this research: a peri-urban area outside of Mexico City, a small town in Puebla, and a rural community in Oaxaca.[36] In selecting these communities, we wanted to include one community where *Prospera* beneficiaries received their payment electronically and can transact using their debit card at different locations using an open loop network. The other communities received debit cards that only operated on a closed loop, or cash disbursement system. This is where *Prospera* beneficiaries must withdraw their entire benefit in cash, and can redeposit it later into a BANSEFI account if they desire.[37] In the process leading up to selecting these three communities, GESOC carried out a ranking exercise of more than 40 communities using the following criteria:

- Presence of BANSEFI branches or Diconsa store
- Presence of other financial institutions, including commercial banks, cooperatives, or microfinance institutions
- Level of remittances
- Level of criminal activity[38]
- Poverty rate

[36] We limit the Mexico Financial Diaries fieldwork to three areas because each researcher can only cover 30 households in a relatively small geographic area, and two researchers work in the same area to be able to cover for each other.

[37] Participants in this study viewed the option of redepositing money onto the card as savings as impractical. At the time of research these cards could only be used for deposits and withdrawals into BANSEFI bank accounts at BANSEFI branches and ATMs without incurring a fee. These service points are far away from the communities, and some beneficiaries do not even know where any BANSEFI branch or ATM is located. In this research we count the BANSEFI account for receiving *Prospera* payments as a financial instrument only if the household used it as an account to save some of their payment or to make a purchase with the card, and not if they only use it to withdraw their entire payment in cash, as is the case for the majority of beneficiaries in Oaxaca and Puebla.

[38] Data from *Centro de Investigación para el Desarrollo A.C.* on crime statistics were used for this analysis. See: http://cidac.org/.

About the sample selection

In total, 185 families completed the Financial Diaries project.[39] As Table 12 shows, about two-thirds of the sample receives *Prospera*.[40] Local community leaders and nongovernmental organization (NGO) staff assisted the local team in finding and recruiting households. *Prospera* staff in each of the communities was instrumental in helping our researchers to build trust with the respondents. We worked closely with *Prospera* to reassure the families that data from this research would be kept anonymous and would not jeopardize the household's benefits.

For the households that do not receive *Prospera*, we aimed to select a comparison group of households that were either slightly too well-off to qualify for *Prospera*, or who should qualify but were unable to enter into the program for a variety of reasons. Some women in this category were waiting to receive the response as to whether they were selected into the program. Other women who work were unable to attend the demanding meeting schedule and thus were disqualified. Also, other families had previously received the *Prospera* benefit but could not keep up with the meetings or other requirements and had left the program. Readers should keep in mind that this small sample was not selected randomly, nor is it designed to be representative of these communities, much less of all low-income Mexicans.

TABLE 12 ▶▶▶ Number of households in the sample by region and receiving *Prospera*

Location	Mexico, DF	Puebla	Oaxaca	Total
Non-beneficiaries	19	22	25	66
Prospera beneficiaries	45	39	35	119
Total number of families	64	61	60	185

[39] Because it is such a long project and circumstances in the households change over time, there is a high risk of attrition in Financial Diaries research. As we wanted 180 families to complete the study, 60 in each community, we oversampled four households for each of the six researchers, for a total of 204 households in the sample. We ended the project with 185 households participating. Attrition was highest in Puebla where we faced problems with families distrusting the results in the initial months of the study.

[40] In this report, we refer to this large conditional social transfer program from the Mexican government by its new name, *Prospera*. However, during the majority of the study period, this grant was called *Oportunidades*, and as of December 2014, the households still know this program by this name.

ANNEX B

METHODOLOGY FOR ADDITIONAL INTERVIEWS FOCUSED ON INTERNATIONAL REMITTANCES

Because the Mexico Financial Diaries did not expressly set out to study international remittance recipients, additional research was needed to complement Financial Diaries data. BFA and field researchers who participated in the original Mexico Financial Diaries project returned to these households in September 2015 and applied an additional qualitative questionnaire that covered the following topics:

- Changes in remittance inflows and other income since the end of the Financial Diaries project in February 2015;
- How the household receives remittances, and any associated challenges;
- How households manage decision making and communication with migrant remittance sender abroad; and
- Respondents' savings behaviors, including motivation for saving and barriers to being able to save.

This report is based on these interviews and data from 26 households that we visited in September 2015, seven months after the Financial Diaries project ended. We applied this questionnaire with three families in the small town in Puebla who participated in the Financial Diaries study. In order to broaden the responses beyond these three families and to get a better sense of the experience of receiving remittances in Puebla, we also interviewed six additional households who receive international remittances but who were not part of the original Financial Diaries project. In Oaxaca we revisited sixteen original Financial Diaries households (thirteen households that received remittances during the study, and three that had received remittances before or after the Financial Diaries study) as well as one additional household that receives remittances but did not participate in the initial Diaries project. In-person interviews were recorded and transcribed, providing the quotations in this report. Families received monetary compensation for donating their time to each interview.

For nine of these households[41] (two in Puebla and seven in Oaxaca), we were also able to speak with the migrant remittance sender in the US by telephone. For these migrants, we applied a 15-minute questionnaire asking about remittance and savings behaviors from the perspective of the remittance sender. In order to achieve this, the households in Mexico helped us to communicate with the migrants and spoke on the phone with their family member in the US before and after the interviews.[42]

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[41] Understandably, participants in this research were worried about potential repercussions for their family members living in the US, the majority of whom are not in the country legally. Residents in the community in Puebla have been victims of scams recently, some rumored to be thieves posing as researchers. In general, residents in this area are distrustful of outsiders. As a result, one Diaries household refused to have her interview recorded and transcribed, and many families refused to contact their family members in the US or to share their contact details for the interviews with remittance senders.

[42] Research instruments available upon request.

ANNEX C

ASSET OWNERSHIP AMONG THE 16 REMITTANCE RECIPIENT HOUSEHOLDS

CODE	Car or truck	Television	Gas or electric stove	Washing machine or clothes dryer	Refrigerator or freezer	Farming tools	Primary residence (where the household lives now)	Cows	Sheep	Donkeys and horses	Chicken or other poultry	Total asset value, Mexican Pesos (MX$)	Total asset values (US$)
Oaxaca 1	yes	no	yes	no	no	no	yes	no	no	no	yes	291,640	$19,443
Oaxaca 2	no	no	no	no	no	yes	yes	no	yes	yes	no	206,495	$13,766
Oaxaca 3	no	yes	yes	yes	no	no	yes	no	no	no	no	376,669	$25,111
Oaxaca 4	no	yes	yes	no	no	no	yes	no	no	no	yes	28,130	$1,875
Oaxaca 5	no	yes	yes	yes	no	no	yes	no	no	no	no	15,800	$1,053
Oaxaca 6	no	yes	yes	no	yes	yes	yes	yes	no	no	no	97,220	$6,481
Oaxaca 7	no	no	no	no	no	no	no	no	no	no	no	N/A	N/A
Oaxaca 8	no	yes	yes	no	no	no	yes	no	yes	no	no	612,600	$40,840
Oaxaca 9	no	yes	yes	yes	no	no	yes	no	no	no	no	84,400	$5,627
Oaxaca 10	no	no	yes	no	no	yes	yes	yes	yes	yes	yes	218,610	$14,574
Oaxaca 11	no	yes	no	no	no	yes	yes	no	no	yes	yes	58,410	$3,894
Oaxaca 12	no	yes	yes	no	yes	no	yes	no	no	no	yes	91,868	$6,125
Oaxaca 13	no	no	yes	yes	yes	no	yes	no	no	yes	yes	189,100	$12,607
Puebla 1	yes	yes	yes	yes	yes	no	yes	no	no	no	no	771,000	$51,400
Puebla 2	no	yes	yes	no	yes	no	yes	no	no	no	no	276,150	$18,410
Puebla 3	yes	yes	yes	no	yes	no	yes	no	no	no	yes	312,350	$20,823
TOTAL/ AVERAGE	3	11	13	5	6	4	14	2	3	4	7	242,029	$16,135

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