The USFD Methodology:

The financial lives of low- and moderate-income Americans

U.S. Financial Diaries

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Introduction

The U.S. Financial Diaries (USFD) is a research study that collected detailed financial data from 235 low- and moderate-income households over the course of a year. USFD employed a research approach that combines quantitative and qualitative methods. Our goal was to better understand households' financial situations and choices by observing household finances at frequent intervals over a long period of time. We designed surveys to record every dollar that participating families earned, spent, borrowed, saved, and shared with family or friends. We also tracked government transfers, assets, financial instruments, and employment, and asked households about their financial goals, attitudes about money, significant life events and physical and mental health.

The traditional narrative about financial success in America is that hard work, steady saving, and a bit of luck will ensure financial security, a comfortable retirement, and a better future for one's children. But large numbers of Americans feel financially insecure and frustrated that the "American Dream" seems increasingly out of reach. This insecurity is so pronounced that when asked by Pew Charitable Trusts if they would rather be a little richer or have a more stable financial life, 92 percent of Americans chose stability—this despite 30 years of wage stagnation and decreased mobility. In 2016, the Federal Reserve's Survey of Household Economic Decision-making found that 44 percent of adults could not cover a $400 emergency expense (an improvement from the 50 percent who could not do in 2013 when the survey was first conducted), including 25 percent of households earning more than $75,000 a year.[4] Important questions about why households are struggling so much, and what programs and policies might make a meaningful difference, have been difficult to answer.

The study offers insight, via a combination of data and stories, into the ways in which households' financial positions shift over time, and how peoples' financial choices influence—and are influenced by—other aspects of their lives. Deep and ongoing engagement between field researchers and participating households is an important part of the financial diaries methodology, and this engagement was fundamental to what makes USFD unique among economic and financial surveys. Field researchers were able to build trusted relationships with households, which in turn allowed them to ask about personal details that are key inputs to understanding the data. Engaging with households over time made it possible to back-fill data and ask follow-up questions.

Economic research tends to focus on high-level data of large samples. At the other end of the spectrum, detailed household financial data tends to come from ethnographies of small groups. The US Financial Diaries fills a gap between these poles. While we did not aspire to be nationally, or even locally, representative, we worked with a much larger group of households than most ethnographies are able to, while also gathering

History of the Financial Diaries Methodology

The financial diaries research methodology being implemented in the USFD was developed by Stuart Rutherford and David Hulme and employed by Rutherford in 2002 in Bangladesh, as a way to get a systematic view into the financial lives of poor families, most of whom were outside the formal banking system. The idea was adapted by Orlanda Ruthven in both rural and urban India, and then refined in 2005 by Daryl Collins for a study of 180 South African households. The methodology has now been used in parts of Africa, Europe, Central and South America, and in additional sites in India. The book, *Portfolios of the Poor: How the World's Poor Live on $2 a Day*, builds from the initial studies.

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much more detailed data and qualitative information than economic studies typically do. Filling this gap came with many challenges: recruiting households; training field staff on a novel approach; gathering, inputting, coding, quality-checking and analyzing such a large and diverse set of data; even interpreting, drawing conclusions and communicating results. We did not start with the aim to test particular hypotheses but instead set out to understand households' conditions and choices from the ground up.

The benefits and challenges of the diaries approach can be seen in the story of one family who participated in the study. Ricardo and Daniela Garza, a couple in their mid-20s, live in northern California with their three-year-old daughter (names and personal details have been changed to protect the families participating in the study). They met Natalie, their USFD field researcher, in the summer of 2012. Natalie and Daniela quickly established a friendly rapport, which grew over the course of the year during which they met. Each of their USFD interviews lasted about an hour and a half—a bit longer than Natalie's interviews with other households because they always started with some personal conversation—and generated data that would require nearly as long to input and verify.

Natalie and Daniela typically met during the week, in the afternoon. Early on, they met in the Garza's home, but they eventually relocated their conversations to a nearby coffee shop, in part because Ricardo was not completely comfortable with sharing the family's personal information.

Over time, Natalie began to understand the Garzas' financial lives. Like many USFD households, the Garzas had many different sources of income and experienced significant fluctuation in their incomes from month to month. Ricardo's primary job paid about $400/week. Natalie learned this wasn't his only source of income. He also worked with a friend who runs a home remodeling business, earning anywhere from a few hundred dollars to more than $1,000 per month. Daniela told Natalie about her own informal income sources, too. She provided childcare services and sometimes sold clothing, jewelry, and flowers, earning anywhere from $0 to $1,740 per month (see Figures 1 & 2). Natalie also captured the Garzas' expenses, which they generally managed to keep to around $2,500 per month. We saw that most months they ended up just about even with the help of credit cards and pawn loans to compensate for the erratic timing of their pay. Other months, when Ricardo or Daniela—or both of them—had a particularly profitable month, they had more financial cushion.

Natalie became familiar not only with the Garzas' financial flows through her regular interviews with Daniela, but also with the choices, tensions and stresses that are not necessarily captured in financial statements. While Ricardo felt that the family was doing just fine, Daniela was troubled by the fact that they were not able to put funds aside for emergencies, for the future, or for their daughter's education. Daniela wished that Natalie could provide some advice, using the data she was gathering, on how she could better manage the family finances, but our research protocols specifically declaimed providing advice.[3]

Background

The US Financial Diaries collected cash flow data and household details to help understand how low- and moderate income American families manage their finances and their lives week-to-week and month-to-month, how they try to get ahead, where they fail and where they succeed,

FIGURE 1: **The Garzas' Income**[1]

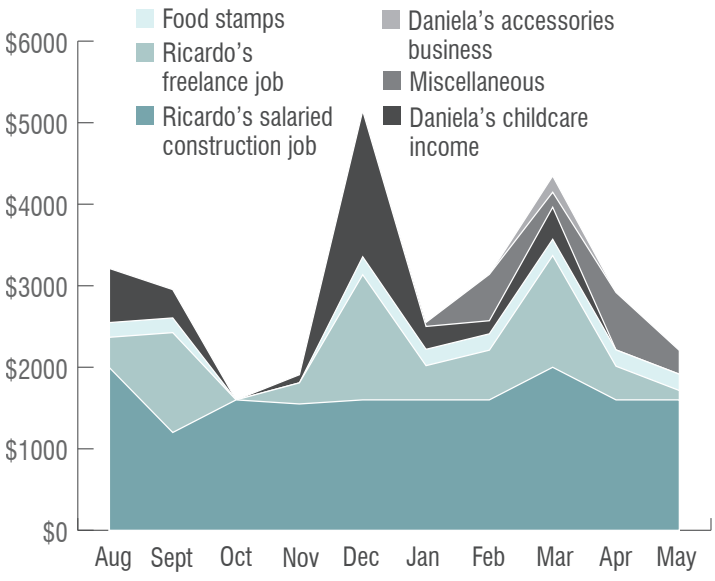
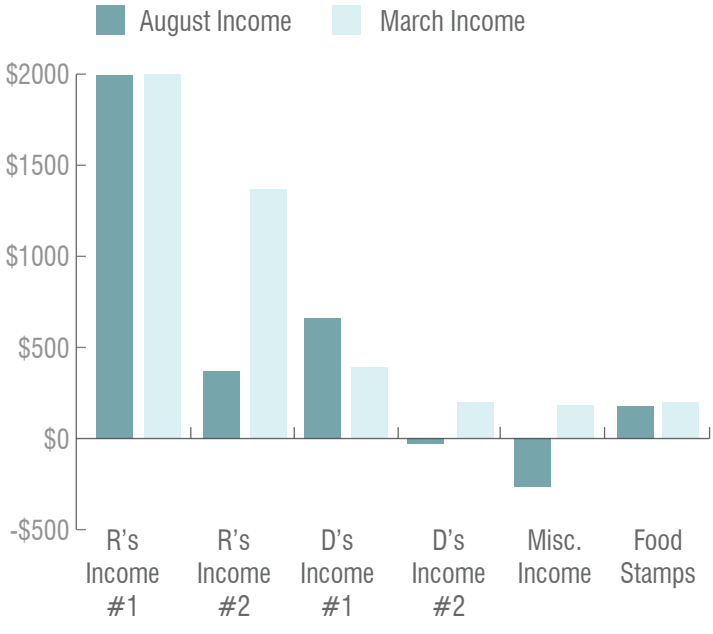


FIGURE 2: **The Balance of Income Sources Varies from Month to Month**[2]



how they use formal and informal financial tools, and what external and self-imposed constraints are at play. These issues often remain obscured to survey teams, government workers, and financial institutions. Survey respondents can be understandably careful not to reveal too much, whether because of a desire to retain privacy, the need to protect gains from others, or the possibility of jeopardizing government benefits. A key reason to use a diairies methodology is the hope of building trusted relationships and obtaining more complete and accurate data.

Our team of field researchers worked in communities in California, Mississippi, New York, Ohio, and Kentucky to delve into the intimate financial details of a final sample of 235 households. Over the course of a year, field researchers visited each family every two to six weeks to collect cash flow data. A major benefit of the USFD methodology is the way it highlights connections across areas of study that are often distinct: to understand how employment dynamics and workforce policies connect with financial services usage, product design and policies, for example. The study focused on several areas of inquiry to complement existing data sets, bringing together types of data that do not otherwise get captured within the same survey.

- Income volatility, expense volatility, emergencies, and their effects
- Budgeting, saving, planning, and financial decision-making
- Behaviors, preferences, and perceptions around financial providers, products, and services
- Family, friendship, and community dynamics

Looking more closely at the Garzas' story, for example, we see some of the roadblocks they faced and how they managed. Daniela works several jobs, rather than one job with more consistent hours and pay in part because her lack of documentation has prevented her from securing something better. In a similar way, when Ricardo's pay for his primary job was cut without a reduction in his hours (during the housing crisis) at the beginning of the study, he stayed at the job rather than seek new employment.

Study Population

The USFD study population is made up of working Americans earning low-to-moderate incomes. When the study launched, all households had a member with a formal job, though some lost those jobs during the study period. Otherwise the households were diverse: traditional nuclear families, single-parent and multiple-parent households, single people just entering the workforce, grandparents, recent immigrants, families in the United States for generations. Households were economically diverse: agricultural workers, office workers, people with full-time jobs and those with a changing mix of part-time employment. The sample includes people like the Garzas doing construction and home remodeling work, day labor, childcare, and sales jobs out of the home. Others in the sample work as short-order cooks, home health aides, janitors, street vendors, teachers and teachers' assistants, administrative assistants, restaurant managers, office managers, truck drivers, day laborers, salespeople, food processing plant workers, nannies, hotel maids, dishwashers, parking lot attendants, taxi drivers, and hair dressers. Some used public programs such as food stamps, housing vouchers, and the earned-income tax credit.

Our approach to defining "low-to-moderate income" focused on income level relative to the federal poverty line, area median incomes, and the Census' Supplemental Poverty Measure (SPM).[5] Most of our final sample had income above the SPM threshold, with about half between the threshold and twice the threshold (see Figure 3). The median household after-tax income was $29,000 (average $35,345).

The study was conducted across four research sites: southwest Ohio and northern Kentucky; eastern Mississippi; the San Jose, California region; and Queens and Brooklyn in New York City (see Figure 4 on page 4). The sites were chosen to represent a variety of household characteristics, regional labor markets, and financial and social policy climates. People living at each site represent immigrant and non-immigrant populations, diverse racial and ethnic backgrounds, and different financial services usage patterns (See Figures 5 & 6 on page 4, and Figure 7 on page 5).

When we set out to identify sites for this research, we began by selecting key demographic groups of interest, aiming to paint a picture of the experiences of different populations. We did not try to create a random sample of households that would be statistically representative of each region.

FIGURE 3: **Percent Below Poverty Line**[6]

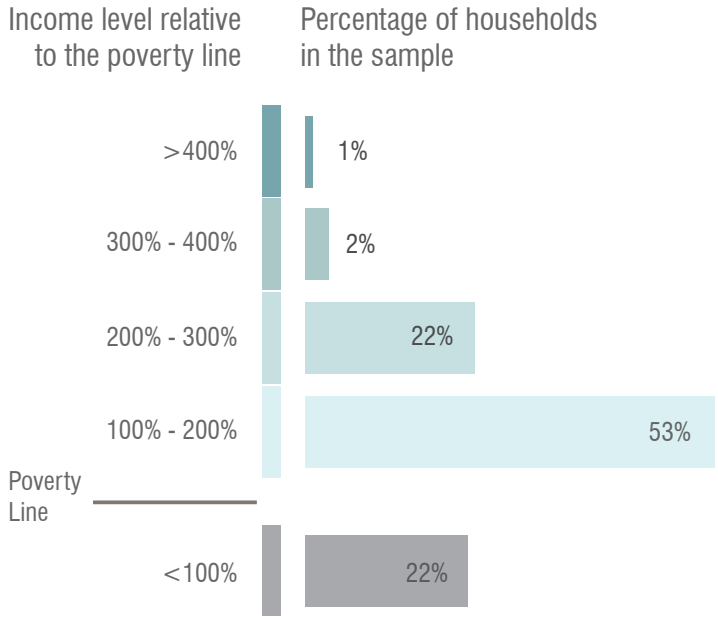
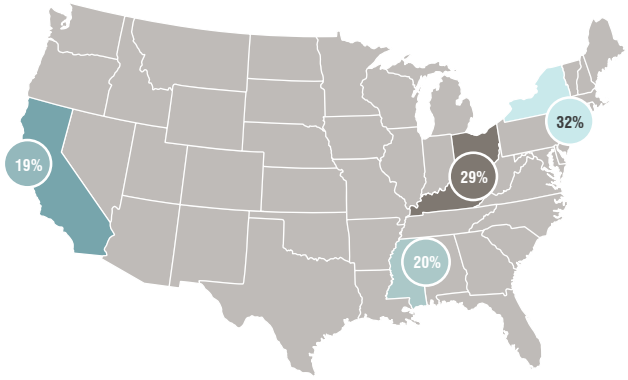


FIGURE 4: **Households by Region**[7]



CALIFORNIA
San Jose and environs
Mix of urban and rural
44 households; 82 adults

EASTERN MISSISSIPPI
Rural environment
47 households; 90 adults

OHIO/KENTUCKY
Cincinnati and environs
Mix of small city and rural
69 households; 141 adults

NEW YORK CITY
Brooklyn and Queens
Urban
75 households; 157 adults

Another important dimension of the site selection was to find urban and rural populations within a relatively small geographic footprint so that field researchers could record the stories of households living in different contexts. In the Midwest, we centered on Cincinnati and surrounding areas in Kentucky and Ohio. In California, we focused on a larger urban center with smaller cities nearby. Finally, we looked for local partners who could cast a net across the community to help us connect with households. The networks of these partners further influenced the boundaries of each site.

Recruitment

To recruit households in each of the four sites, we relied on more than 100 local partners, including direct-service non-profit organizations, churches, technical and community colleges, K-12 schools, local businesses, community leaders, and employers. Between the fall of 2011 and spring of 2012, we conducted the recruitment questionnaire with more than 400 people, from which 348 households were ultimately recruited to join the study.

To acknowledge the major time commitment and sharing of personal data that went along with participation in the study, families were given between $600-$850 worth of gifts, as well as non-monetary gifts (such as coffee mugs, notepads, and pens), over the course of the study. Money was distributed in the form of gift cards that could be used at a wide variety of retailers. Households were generally not notified about these gifts in advance, nor were gifts provided on any kind of predictable schedule. Still, some households came to expect the gifts. The Garzas, for example, reached out to Natalie on one occasion to ask when their next gift would arrive.

The distribution of monetary gifts presented an opportunity to explore households' handling of the money under different circumstances. We ran an experiment in which a randomized sample of about half of the households were given a $250 gift two to three weeks in advance of the other half in order to see how an unexpected, sizable chunk of money would be spent. Preliminary results show that little was saved or used to reduce debt; most of the money was spent within two weeks.[9]

Our sampling method, based on respondent-driven snowball sampling, was designed to help us to collect our sample across income ranges and sources, as well as other characteristics we were seeking (such as education level, bank account access, types of income earning activities, racial and ethnic groups, family structure, family lifecycle stage, and rhythm of income), with some precision against the population statistics in each region. Both community organizations and households we had already recruited helped point us to families of interest. Before we approached a new family about being included in our study, we spoke informally with our existing contacts to gather

FIGURE 5: **Income Distribution by Region**[8]

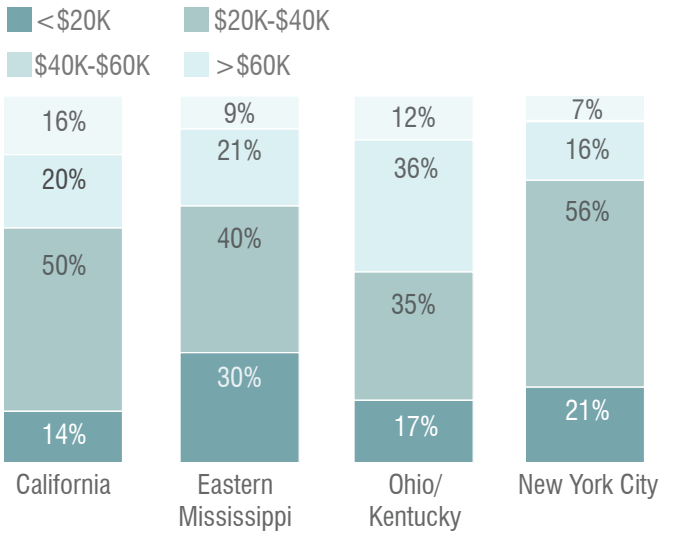


FIGURE 6: **Banking Status by Region**[10]

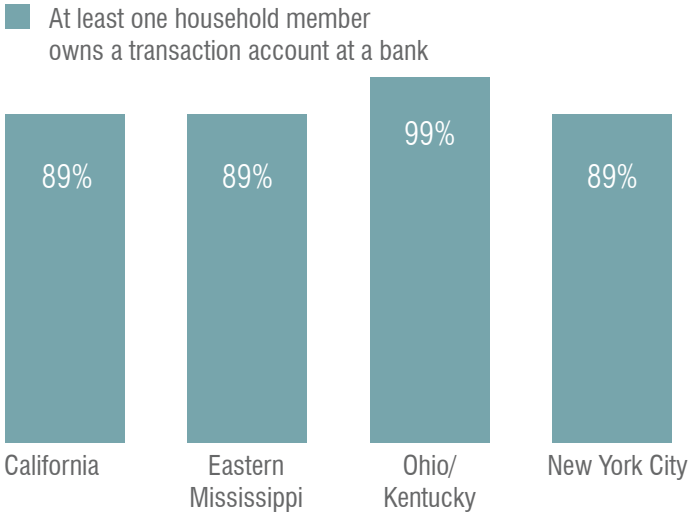
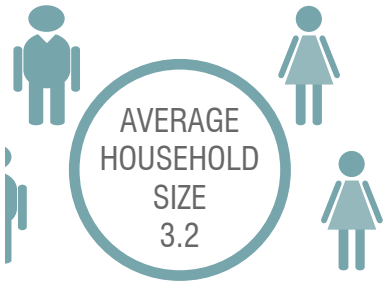
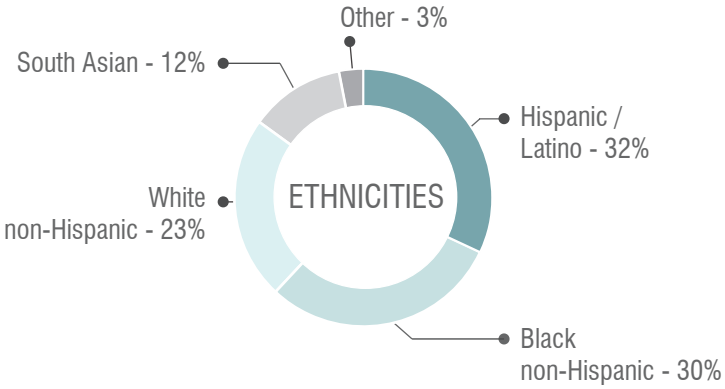
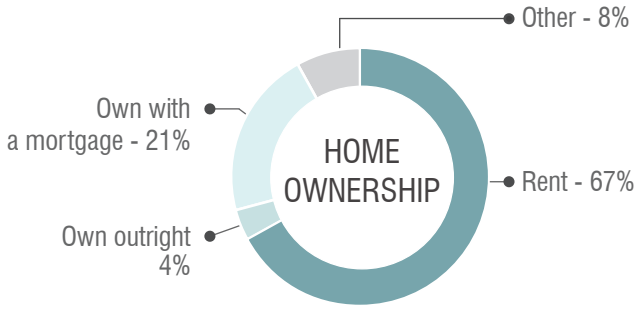


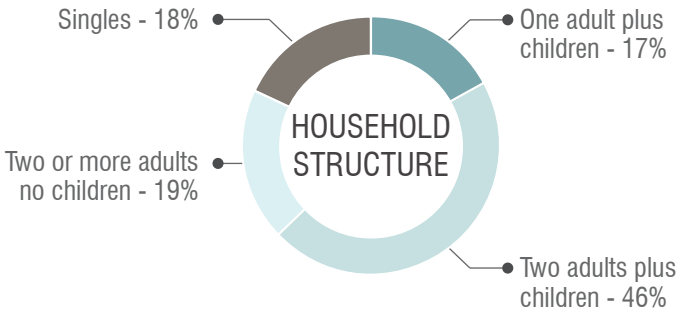
FIGURE 7: **Snapshot of USFD Households**[11]







IMMIGRATION STATUS OF NON US-BORN PARTICIPANTS		
COUNTRY	**TIME IN US <10YRS**	**% CITIZENS OR RESIDENTS**
Colombia (18HH)	44%	67%
Ecuador (9HH)	22%	44%
Mexico (28HH)	18%	43%
Bangladesh (22HH)	62%	95%
India (6HH)	50%	100%



preliminary information about the family. (See more on the snowball sampling under "Challenges" below.)

While some characteristics were easy to determine—for example, family size and lifecycle stage, and industry of employment—others, such as receipt of public benefits and bank account access, were trickier to decipher. To learn about these aspects of a family's life, we relied on our first interview with the family. We monitored the characteristics of the families we added to our sample throughout the recruitment process in order to reach a mix of profiles.

The Survey Process

Initial Questionnaires

Following recruitment, households were taken through three initial questionnaires to gather information on household demographics, physical assets, typical income, historical and current employment, and current and previous use of financial instruments. Financial instruments include checking accounts, savings accounts, savings clubs, payday loans, the use of pawn shops, etc. These three questionnaires were intended

to be conducted over three interviews: one for demographic data, one for income and assets data, and a third for financial instruments data. They allowed households to become more comfortable with the fieldworkers, and helped the fieldworkers to establish a high-level understanding of household balance sheets and monthly cash flows.

At the outset of the study, our intention was that content from the initial questionnaires and diary questionnaires would inform subsequent diary questionnaires, thus making questionnaires customized to individual households. Data entry delays impeded this process, and the questionnaires were less tailored than we would have liked (see below under "Challenges").

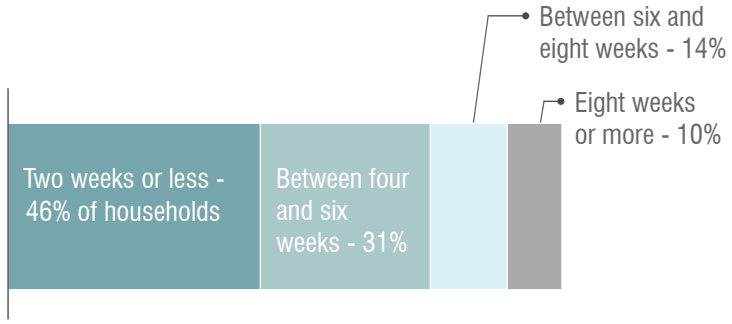
Diary Questionnaires and Research Modules

After completing the three initial questionnaires, the households were interviewed approximately every two to six weeks to capture cash flows in and out of the household, and track income, expenditures, changes in physical assets, servicing of financial instruments, initiating of financial instruments, and more. Not all households who completed the initial questionnaires remained in the study, and interview frequency varied by household (see Figures 8 and 10). Some households kept detailed records to prepare for interviews. Others gathered account statements or receipts. Many relied on a mix of records and memory.

At each interview, the respondents were also asked if they did anything new since the last interview, i.e. opened a new bank account, or stopped using a financial device. Each new financial device was captured on a specific form and cash flows generated by that device were captured thereafter. When financial devices were closed, separate forms captured that information. Respondents were also regularly asked if major events had happened—if a person joined or left the household, if a new or casual job began or ended, or if a physical asset was bought, sold, or lost. Each visit, the fieldworker also completed a journal to note observations, events, or comments made by the respondent that were not captured elsewhere (see more below).

Additionally, seven shorter, add-on modules were employed throughout the study period, allowing us to explore certain topics in more detail. Each module was delivered only once during the study. These modules broke away from the core financial diaries focus on logging cash flows . This served two purposes: It enabled a deeper, more open-ended inquiry into household situations that we learned about during cash flow data collection and it enabled gathering

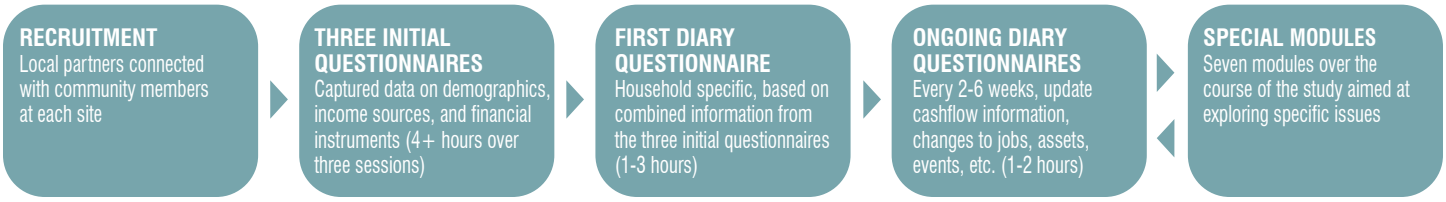
FIGURE 9: **Days Between Interviews**[12]



of data that could be used to help interpret cash flow data. Module topics included:

- **Aspirations & Attitudes:** Designed to address the ways in which respondents view and plan for the future, this module posed questions about financial planning, goals, and attitudes.
- **Financial Choices & Knowledge:** This module included questions about risk aversion, patience and present-bias, taking chances, getting things done, financial literacy, numeracy, and financial knowledge.
- **Financial Instruments:** This questionnaire shed additional light on financial choices, with a focus on the use of particular devices and strategies. We asked about balances, savings, borrowing/lending, alternative lenders, credit cards, banks, insurance, saving and borrowing simultaneously, and credit history.
- **Tax Time:** A two-stage module, this inquiry included one questionnaire for households to fill out before taxes were filed and one to fill out after a refund was received. These questionnaires examined the role of tax payments and refunds in the core Financial Diaries instrument.
- **Income:** This module was designed to explore volatility of hours, availability of hours, and working extra as a coping mechanism.
- **Health:** This questionnaire inquired about the relationship between finance and health.
- **Gift Card experiment:** Using the distribution of gift cards as a way to learn more about participants' behaviors, this experiment explored questions such as: What happens when a big gift arrives? How much is saved and how? How much is spent and how? Do people spend extra in anticipation of big gifts? (See Recruitment section above for more on gifts.)

FIGURE 8: **Survey Process**



Journals

Regular and ongoing contact with the households enabled field researchers to make personal connections with the families participating in the study. The trust established between fieldworkers and households facilitated the collection of detailed data on activities often not fully explained through standard surveys: informal finance, side jobs, temporary casual labor, cash spending, and saving outside of banks. Journals that the field researchers kept over the course of the study provide critical qualitative details that add depth and color to the numbers, helping to explain why and how the families do what they do. Further, the journals provided a vehicle in which fieldworkers could note and explain ambiguities in the data.

In the case of the Garzas, the journal helps us to understand more about the struggles of an immigrant family. Moreover the journal provided a vehicle through which Natalie could explain that the $5,800 spike in income Ricardo and Daniela had in June were funds to help pay for their wedding: $2,800 in cash given by friends and family and $3,000 in a loan.

Attrition

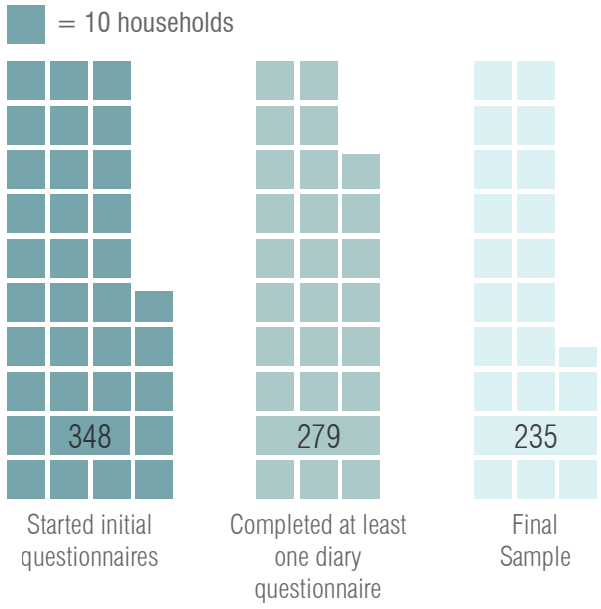
When data collection began, 348 households had signed up to participate in the study. Our final sample was 235 households that had reported enough high-quality data to analyze – households with 10 months or more of detailed cash flow data (see Figure 10). Attrition occurred across the sample, so the demographic distribution of recruited households remained sufficiently intact (see Figure 11).

There were several causes of attrition. First, in the initial interviews field researchers asked many personal questions—bank account balances, debts outstanding —and even though respondents entered the study fully informed about what participation meant, for some, when the time came to reveal this information, they decided they did not want to participate after all. Second, we lost contact with some households who had agreed to participate because administrative challenges caused a delay between the initial questionnaires and the beginning of the diary questionnaires. Other households withdrew over time due to the normal pace of life: people had trouble finding time for regular meetings, changed jobs, moved, etc. The $600-$850 worth of gifts provided to households over the course of the study was aimed, in part, at limiting such attrition; we see that strategy as largely successful.

Challenges

A study of this kind comes with a number of challenges. Financial diaries methodologies are very data intensive. The diaries approach asks researchers to build and maintain trusting relationships with study participants over a long period of time, to carefully observe and document details

FIGURE 10: **Attrition**[13]



about how they manage their financial lives, and to record highly irregular data in a format that is standardized to the extent possible and yet contains significant variability. Detailed below are some of the challenges we faced, as well as steps we took to address them.

Recruitment: Snowball Sampling

Our use of respondent-driven snowball sampling was intended to help us get deeper into the communities in which we established our research sites, by asking interested households to recruit others to join the study as well. However, this method was not as successful as we had hoped. When snowball sampling did not work, we recruited directly via connections made through local organizations.

Changes in Household Behavior

One risk inherent in this study was that behaviors of the participants change by virtue of the fact that they participated in the study: a risk that, because their financial activities were being closely watched and recorded, participants behaved differently than they normally would. This was an inevitable and unavoidable tradeoff given the study design. At the very end of the study period, we asked households directly whether their behavior changed much as a result of being in the study, and about three quarters indicated that it did (though at least one piece of independent research suggests that diaries participation doesn't materially affect behavior).[15] Nevertheless, we still saw households struggling to pay bills on time, get out from under debt burdens, and save in a regular way. Our sense is that while the survey process affected people, the distortion likely showed us a better version of what might have happened had we not been there.

FIGURE 11: **Changes to the Sample as a Result of Attrition**[14]

HOUSEHOLD STRUCTURE		
348HH	**HH TYPE**	**235HH**
28%	ONE-PARENT	25%
34%	TWO-PARENT	37%
11%	MULTI-GEN	14%
7%	COUPLES	8%
15%	SINGLES	16%
5%	MISSING DATA	0%
ESTIMATED INCOME AT RECRUITMENT		
348HH	**FEDERAL POVERTY LINE**	**235HH**
14%	<75%	14%
15%	75%-100%	14%
21%	101%-150%	23%
20%	151%-200%	20%
13%	201%-300%	15%
16%	MISSING DATA	14%

Scheduling and Data Entry

Households participating in the study had to make time for an in-depth interview every two to six weeks. Interviews generally took an hour and 15 minutes to an hour and a half – but could take as long as two to three hours. To ensure that the families were interviewed, field researchers had to be flexible and available, willing to visit households on evenings and weekends. Field researchers also regularly faced cancellations and rescheduled interviews. Significant technical challenges also impeded data entry, which in turn made it harder for field researchers to schedule future interviews and verify data already gathered. While we initially planned to meet with households every two to three weeks, these scheduling and data entry challenges meant that some households met with fieldworkers less frequently (see Figure 8 on page 6).

The volume of information gathered during the interviews could be large. On average, field researchers recorded 56 separate cash flows in an interview (cash flows are defined as the movement of money into or out of a household, or between financial instruments). Some data was especially difficult to gather (for example, cash transactions). One result was that spending data was generally far less complete than income data. Also, balances for financial instruments were difficult to obtain regularly to fully cross-check cash flow data. This was especially true of instruments not accessed regularly, such as mortgage loans and 401(k) accounts. In all cases we accepted estimates. In addition to cash flows, field researchers were also collecting data for the specialized modules, which added to the volume of data and length of interviews.

We hired extra support staff to enter data to help field researchers, freeing up their time and reducing delays between interviews due to unrecorded data. Also, whereas data was initially collected by hand and then entered into the database later, mid-way through the study we provided field researchers with tablets so that they could enter some data as it was gathered.

Data Quality

With a large volume of data produced by hundreds of families collected by a dozen field researchers, there is potential for error both from the source and in the collection process.

For instance, problems with recall by household members create noise in the data, and the noise can exaggerate impressions of issues such as volatility. Inaccurate reporting about timing may also create the appearance of spikes and dips: households may forget when exactly income was received or when spending occurred, so cash flows may get clumped together in self-reported data, creating the false appearance of spikes. These inaccuracies are most common in those households that depend more on cash (because fewer records are kept) and those that patch income together from varying sources with irregular payments (due to part-time work, self-employment, irregular hours, overtime, etc.). These households tend to be poorer, and the noise can give the exaggerated impression that poorer households have more volatile income.

Early in data collection it also became clear that each field researcher had his or her own approach to managing the ongoing diary questionnaires. Although they were in regular contact with each other, with the data manager, and with the research manager, they were mostly isolated in their day-to-day work. This made it difficult to know what was working and what was not working in the field. Thus, to better connect them and help them learn from each other, we established a shadowing system so that the best field researchers could coach some of their peers. This system provided insight into what methods worked best. Additionally, the field research manager and the data manager held weekly calls with the field researchers and conducted periodic field visits and trainings.

We had planned to track data quality interview-by-interview as the data came in, but we were prevented from doing so by a combination of technical challenges, delays in data entry, and the need to develop a useful and comprehensible measure of data quality even as interviews were still in progress. Nonetheless, data quality was initially tracked interview-by-interview using measures of the gap between reported financial inflows and outflows. This margin of error typically started high in the first few interviews and fell as households became used to the survey process and developed trust in the field researchers. Large gaps triggered increased attention from the research manager.

The margin of error calculation was meant to give field researchers a condensed overview of how completely they were connecting the reported income and spending of a household with its financial tools and instruments. Each income flow was matched with a deposit, and each spending flow was matched with a withdrawal. In addition, in the case of cash transactions, the measure revealed the gap between cash income totals and cash spending totals. The measure often gave just a partial view, however. For example, it failed to reveal cases in which data on spending for a particular item and data on the financial source were missing. In those cases, it would look like households were saving more than they actually were. We eventually developed alternative data-checking protocols and saving measures to catch those errors.

In recognition of these challenges we also initiated a data validation process while data gathering and entry were still ongoing, helped by additional staff. These staff members combed through data to identify inconsistencies and errors, and worked with field researchers to correct issues that arose. This required particular attention to detail, because we believed that outliers were not necessarily the result of erroneous data. In fact, when reviewing a year of financial data, outliers may well be the key to the story. Thus, validating the data required an in-depth review of the narrative information recorded in the journals alongside the data. To make the valuable details contained in the journals more comprehensible and functional, we worked to turn the written narratives into a searchable database.

After the main period of data collection ended, the team spent an additional six months following up with households to verify unusually high or low values for income or spending. The team then determined if the spikes and dips were due to measurement error and could probe whether cash flows were missing or misrecorded. The focus was on outliers that could easily skew the picture, especially values 50 percent above or below the household's median monthly income.

During this six-month follow-up period, the team also checked unusually big or small values of tax refund flows, sales of physical assets, and withdrawals from retirement accounts. A similar process was used to detect typos and mistaken duplicates of information. As a cross-check, the team then turned to data collected on the form of transaction and on financial mechanisms. The team checked income inflows against the mode and deposit data to determine the net amount of the income inflow. The team then checked summary statistics to detect outliers and patterns that appeared inconsistent with the field researchers' understandings of the households and the overall sample.

Questionnaire Format

For certain households—for example, those containing many family members, those using many financial instruments, and those with complicated income situations—diary questionnaires were long and complex.

The cash flow recording protocol proved overly complex, and was a legacy of extending a protocol that worked well in other countries into the US. For example, checks, money orders, transit cards all had to be entered duplicatively, and information on the timing, location, and nature of all transactions was recorded, even though that information ended up being relevant for a subset of transactions. Though field researchers completed the survey form and entered data into the database according to a standard format, they each developed their own system for efficient data collection.

The study was designed with mechanisms to mitigate the burden of collecting such detailed data. One such mechanism was a plan for each diary questionnaire to inform the next so that subsequent questionnaires would eliminate redundant questions and be automatically adjusted for new or different information. However, technical issues, and the demands on field researchers described above prevented us from doing so.. The hiring of additional data entry staff and our transition to having fieldworkers enter data in real time using tablets mitigated this challenge over time.

Delays and Extended Time in the Field

The launch of the study was planned for the summer of 2012, but we faced delays. Initially, requirements from our institutional review board (IRB) and technical challenges slowed our pace. Then, recruitment and initial questionnaires took longer than expected. Because of these delays, we did not get into the field until later in 2012. We then extended our time in the field from July to December 2013 in order to gather diaries cash flow data in every calendar month from as many households as possible (in the end we chose to analyze 235 households that had cash flow data in at least 10 months). An unexpected benefit of these delays was that we came out of the field on a rolling basis rather than all at once, with two field researchers closing out their work per month beginning in July. This schedule made the completion of final questionnaires and data cleaning process much more manageable.

Conclusion

A great deal of attention has rightly been paid to issues like wealth inequality and economic mobility—issues which play out over lifetimes or generations. But the day-to-day and month-to-month challenges and choices of households are also important to understanding economic conditions and household finances. The closer focus enabled by the US Financial Diaries has delivered new insight into the hard-to-see aspects of the financial lives of low- and moderate-income American families.

The project was ambitious and novel. To our knowledge no one had attempted to gather such high frequency financial data on such a large, and demographically and geographically diverse group of American households before. We expected to encounter challenges and were not disappointed. As with any project of this scope, in hindsight we can see a number of unanticipated limitations of the data and ways in which the project could be improved.

For instance, our initial priority was to gather complete data on cash flows, based on concern for "missing data" in many household surveys and from a methodological commitment to an open-ended approach. The aim was to ensure that we could follow questions that emerged through the course of the study, rather than limit ourselves to pre-conceived questions. While the open-endedness was important in many ways, the integrity of the data would have been enhanced by placing more limits on data collection. Ultimately researchers have to make trade-offs between cost, time (of researchers and participants), and usefulness of quantitative and qualitative data. Overall we would advocate for more emphasis on qualitative features that are ultimately necessary for fully understanding quantitative data in future diaries research.

Still, the data we were able to gather and the analysis we conducted have already reshaped understandings of key parts of household financial lives in the United States with relevance for policy, financial product design, and program development. USFD data has opened new vistas on the prevalence of within-year income volatility, the use of short-term savings, the financial interconnectedness of family and friend networks, and short-term poverty spells. Some of the ideas have already been extended in broader-scale research and policy work by the Federal Reserve, Aspen Institute, Pew Charitable Trusts, Urban Institute, JPMorganChase Institute, and others.

Our hope is that our findings on the day-to-day and month-to-month choices and challenges of American households—findings that could be revealed only by combining high-frequency observations of quantitative and qualitative aspects of household financial lives—will continue to inform future research and the development of new policies, services, and financial products. We hope that other researchers will build on the USFD findings and on the diaries methodology to continue to explore questions about household finance through high quality, frequent and sustained data collection.

Notes

1. For more on this and other households, visit www.USFinancialDiaries.org.

2. Daniela can have negative cash flows in months when she purchases items for her business in advance of payments from her customers.

3. There were several factors that influenced our decision to avoid offering advice. First, our primary aim was to learn how households managed their finances and we wanted to minimize the ways in which participating in the study might change household behavior. Second, we did not believe we were in a position to offer advice we could be confident would be optimal for households. As a result, we directed field researchers to explicitly tell participating households that we would not offer advice but were interested in learning from the households. At the end of the study, participating households were provided a summary of the data we had gathered from them.

4. Federal Reserve Board, "Report on the Economic Well-Being of U.S. Households in 2016," March 2017.

5. The US Bureau of the Census' Supplemental Poverty measure (SPM) adjusts for, among other things, regional variation in the cost of living. See https://www.census.gov/topics/income-poverty/supplemental-poverty-measure.html

6. The data in Figure 3 represent 219 households, and were analyzed in September 2014.

7. The data in Figure 4 represent 235 households and were analyzed in March 7017.

8. The data in Figure 5 represent 235 households and were analyzed in March 2017.

9. See Lee and Morduch, "Poverty and the Marginal Propensity to Spend: Experimental Evidence from the US Financial Diaries," US Financial Diaries Working Paper, 2018.

10. The data in Figure 6 represent 235 households and were analyzed in March 2017.

11. The data in Figure 7 represent 235 households and were analyzed in March 2017. Income data are based on after-tax values. Data on ethnicity and immigration status reflect information about the head of each household. Data on household size, homeownership status, and household structure reflect household characteristics during the first month of data collection.

12. The number of interviews represented by Figure 9 totals 3418 drawn from 235 households, from data analyzed in March 2017.

13. The data in Figure 10 were analyzed in March 2017.

14. Figure 11 compares demographic data between the total number of households recruited into the study and the final 235-household sample, after all attrition. Households with missing data about household structure and income level did not provide information on these characteristics on the recruitment survey. Income level data are based on households' estimated annual pre-tax income as recorded on recruitment questionnaires. In contrast, income data in Figures 3, 4, and 5 are based on observed cash flows in the final 235-household sample.

15. Gunther and Smits, "Do Financial Diaries Affect Financial Outcomes? Evidence from a Randomized Experiment in Uganda," Working Paper, Feb 2017.

Photo Credits

Juan Carlos: top left (farmstand) and bottom (family in a cafe)
Demetrius Freeman: middle center (woman sitting on a bench)
Robin Holland: middle left (taxi driver)
Whitten Sabbatini: top right (man with a beard), middle right (woman hugging her son)

The subjects of the photographs are not participants in the US Financial Diaries Project, but they live and work in regions similar to our study sites.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Aceptamos
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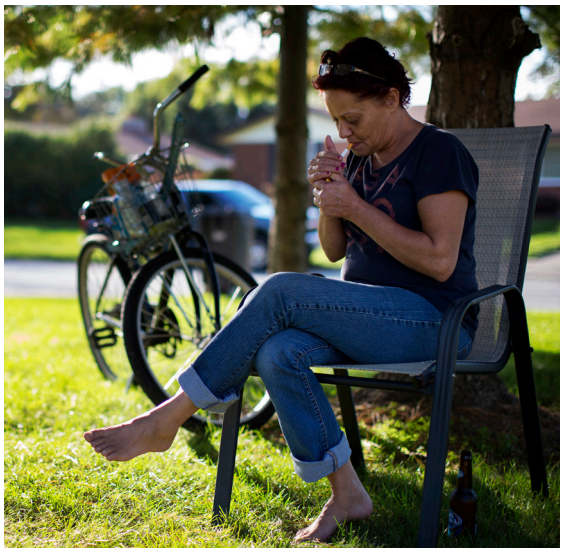

U.S. Financial Diaries

The U.S. Financial Diaries Project was designed and implemented by Jonathan Morduch of New York University's Financial Access Initiative (FAI), Rachel Schneider of the Center for Financial Services Innovation (CFSI), and Daryl Collins of Bankable Frontier Associates (BFA). The project collected detailed cash flow and financial data from more than 200 families in the US over the course of a year. The data provide an unprecedented look at how low and moderate-income families—in four regions and 10 distinct demographic profiles—manage their financial lives. Leadership support for the US Financial Diaries Project is provided by the Ford Foundation and the Citi Foundation, with additional support and guidance from the Omidyar Network. For more information, please visit **www.usfinancialdiaries.org.**

fai Financial Access Initiative NEW YORK UNIVERSITY

The Financial Access Initiative (FAI) is a research center focused on exploring how financial services can better meet the needs and improve the lives of poor households. At FAI, we systematize evidence and communicate lessons, generate new evidence, and frame policy and regulatory issues. FAI is housed at NYU's Robert F. Wagner Graduate School of Public Service. Visit **www.financialaccess.org**; learn more about the Big Questions in financial access at **www.financialaccess.org/big-questions**; follow us **@financialaccess.**

CFSI Center for Financial Services Innovation

The Center for Financial Services Innovation (CFSI) is the nation's leading authority on financial services for underserved consumers. Through insights gained by producing original research; promoting cross-sector collaboration; advising organizations and companies by offering specialized consulting services; shaping public policy; and investing in nonprofit organizations and start-ups, CFSI delivers a deeply interconnected suite of services benefiting underserved consumers. Since 2004, CFSI has worked with leaders and innovators in the business, government and nonprofit sectors to transform the financial services landscape. For more on CFSI, go to **www.cfsinnovation.com** and join the conversation on Twitter at **@CFSInnovation**.

BFA Bankable Frontier Associates

Bankable Frontier Associates (BFA) is a niche consulting firm based in Boston, focused on a specific purpose – supporting our clients in their efforts to expand financial services to the poor. Our approach is to facilitate strategic thinking about emerging markets and products. We are committed to working in partnership with cutting edge development organizations which include policymakers, regulatory agencies, private foundations, banks and other providers of innovative financial services. For more information, please visit **www.bankablefrontier.com**.

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