Resilient in the Midst of Financial Change

A Geographic Investigation of Brick-and-Mortar Financial Services and Households' Financial Health

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Acknowledgments

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Overview

A household's ability to adjust to changing financial circumstances provides evidence of good financial health and demonstrates their resilience in the face of unexpected financial emergencies. To reinforce their resilience, households may use savings, credit, and insurance from financial services such as banks, credit unions, and alternative financial service (AFS) providers. The types of financial services available within the community may be associated with resilience, improving or impeding a household's ability to save for emergencies or access credit.

This study used data on financial services, individual/household and community demographics (including smartphone use), and household financial health to test whether the geographic concentrations or densities of bank and credit union branches and AFS providers within communities were associated with households' financial health. We explored these associations by income given that households may be exposed to varying densities of financial services within communities based on their income levels.

The findings from this study are not intended to be used for drawing clear prescriptions about building brick-and-mortar branches in communities. Instead, these findings offer preliminary understandings of whether the availability of financial services in communities relates to households' financial health, for which households, and under what conditions.

Key Findings

- The availability and composition of financial services within communities are associated with lowest- and modest-income households' **resilience**, suggesting that these households may be more sensitive to the financial services within their communities than those with greater income.
  - The availability and composition of financial services is associated with saving for emergencies, accessing credit, having health and life insurance, and meeting short-term savings goals among lowest-income households with annual incomes below $35,000, and/or for modest-income households with incomes between $35,000 and $75,000.
  - There is no evidence that financial services are associated with the resilience of households with annual incomes of $85,000 or more.

- **The presence of banks and credit unions tends to be associated with households'** greater financial resilience, whereas the presence of AFS providers may impede their resilience.
  - For each additional bank or credit union branch per 1,000 population, the probability of lowest-income households having health insurance rises by 12%, whereas this probability falls by 8% for each additional AFS provider.
  - The probabilities of being confident in meeting short-term savings goals increase by 16% when lowest-income households are located in communities where densities of bank and credit union branches outnumber those of AFS.

- Income differences reveal how the composition of financial services in communities can relate to **households'** resilience. More specifically, modest-income households may be better poised to leverage the presence of banks and credit unions in order to benefit their financial health.
    - o The probability of saving for emergencies increases by 4% when modest-income households are located in communities with at least equal densities of bank and credit union branches to AFS providers when compared to communities where AFS providers outnumber bank and credit union branches.

Introduction

Financial health has been defined as being able to manage day-to-day finances, adjust to changing financial circumstances and unexpected expenses, and plan for long term financial goals (Gutman, Garon, Hogarth, & Schneider, 2015). This definition recognizes that being able to adjust to changing financial circumstances—to demonstrate resilience in the midst of unexpected financial emergencies—is an important indicator of households' **financial health**. Resilience is especially important for households with lowest and modest incomes, given that they tend to have the fewest financial resources and also the greatest fluctuations in their finances (Pew Charitable Trusts, 2015). For example, 60% of households cope with at least one **financial emergency in a year's time**; however, 73% of households with annual incomes under $25,000 struggle to recover financially from this emergency compared to just 35% of households with annual incomes above $85,000 (Pew Charitable Trusts, 2015). Moreover, lowest-income households can expect to lose **three times' more days** of income to their most costly financial emergency than their highest-income counterparts (Pew Charitable Trusts, 2015).

To be resilient, households need financial resources to fall back on when they experience unexpected financial emergencies. Financial resources may help a household to more easily absorb costs associated with an unexpected financial emergency and to recover more quickly. Specifically, households that are able to achieve short-term financial goals like saving for emergencies, establishing credit, or acquiring insurance coverage may be better equipped to adjust to changing financial circumstances and, then, to invest in their futures.

A household may be able to use financial services for establishing resilient financial health. For example, a household can save for emergencies in the checking and savings accounts offered by banks and credit unions. Banks and credit unions also offer credit cards and small-dollar loans, which provide a household with credit and a wider array of financial tools. In fact, when households were asked where they would find the money to cope with a financial emergency, 65% of them indicated that they would use money from savings and investments and 25% indicated that they would use credit (Lusardi, Schneider, & Tufano, 2011). Without a checking or savings account to save for emergencies or access to a credit card, however, a household may instead use AFS providers such as check cashers and payday or title lenders to help them meet unexpected expenses. Indeed, this is a commonly-used option for dealing with financial emergencies: 19% of households say they would use AFS providers if they experienced a financial emergency and needed money (Lusardi, Schneider, & Tufano, 2011).

The types of financial services that a household uses—and how the use of these services relates to resilient financial health—may depend in part on their availability within a **household's** community. Though, there is rather little evidence of these relationships and existing evidence tends to focus on the availability of AFS providers. For example, a person living closer to a state that permits the operation of AFS providers like payday lenders uses these lenders at higher rates (Bhutta, 2014; Friedline & Kepple, 2016) and experiences small, negative effects on their credit scores (Bhutta, Skiba, & Tobacman, 2015). In other words, a household may increase their

use when payday lenders are more geographically available and their financial health may be negatively impacted because of such usage.

> *The types of financial services that a household uses—and how the use of these services relates to their financial health—may depend in part on the availability of these services within a household's community.*

Given how little we know about the relationship between the availability of community financial services and resilient financial health, this study seeks to address several important questions. For example, is a higher concentration or density of alternative financial services negatively associated with a **household's** ability to save for emergencies? Is a **household's** credit access associated with living in a community with more bank and credit union branches than AFS providers? Is the availability of financial services associated with having insurance as a financial safety net? We test these questions using data on financial services, community demographics, and household financial health. Moreover, we explore these associations by income[1] given that households may be exposed to varying densities of bank and credit union branches and AFS providers within communities based on their income levels.

A Geographic Investigation of Financial Services and **Households' Resilient** Financial Health

This brief report investigates the association between the geographic availability of financial services—the concentrations or densities of bank and credit union branches and alternative financial service providers within communities—and **households'** financial health using data from the 2012 National Financial Capability Study (NFCS), 2014 Consumer Financial Health Study (CFHS), US Geological Survey, FDIC, National Credit Union Administration (NCUA), Esri **Business Analyst, and US Census Bureau's Ameri**can Community Survey (ACS). Zip codes served as a proxy for communities given that the use of geographic space (i.e., activity space) is larger than other, smaller geographic units such as census blocks (Crawford, Jilcott Pitts, McGuirt, Keyserling, & Ammerman, 2014).

Financial services in communities were measured in two different ways. First, we examined the densities of bank and credit union branches and AFS providers[2] as the numbers of financial services per 1,000 population in a zip code. Density measures adjust for the population size and, when examined as predictors, can indicate whether there is an increase or reduction in a

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[1] The samples were divided into lowest-income households with less than $35,000 in annual income, modest-income households with between $35,000 and $75,000 in annual income, and highest-income households with more than $75,000 in annual income.

[2] AFS providers included auto title loan, payday loan, check cashing, tax refund, pawn shop, and rent-to-own services.

household's financial health for each additional financial service within every 1,000 people.[3] Second, we examined the composition of financial services relative to one another. That is, there **may be differences in a household's financial health if the density of bank and credit union** branches in their community is greater than the density of AFS providers. From this perspective, **the relative mix of financial services may relate to households' financial health.** Additional information on the data and methods is available in the technical appendix.

Anticipating Financial Emergencies

One indicator of a household's resilience is having savings set aside for unexpected financial emergencies. Unexpected financial emergencies like a job loss or medical bill can threaten overall financial health. These emergencies are commonplace and may impact up to 60% of households each year (Pew CharitableTrusts, 2016). When households have emergency savings on hand to cover unexpected expenses, they are less likely to experience subsequent material hardship such as having their phone or utilities shut off or delaying medical care (Gjertson, 2016; Grinstein-Weiss, Despard, Guo, Russell, Key, & Raghavan, 2016).

> *Some households may be better prepared for financial emergencies when they live in communities with greater densities of banks and credit unions than AFS providers.*

The Change in Probability that a Modest-Income Household Saves for Emergencies
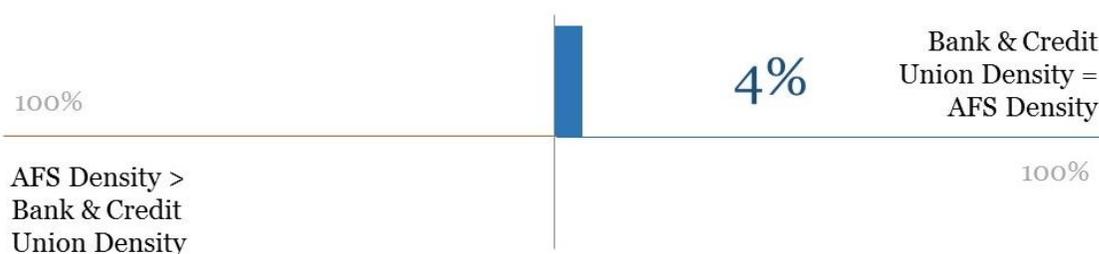
100%   4%   Bank & Credit Union Density = AFS Density

AFS Density > Bank & Credit Union Density   100%

Note: This figure presents findings from the correlational relationships between financial services densities and lowest-**income households'** (*N* = 8,382) reported saving for emergencies from the 2012 National Financial Capability Study (NFCS). The complete analysis is available in the technical appendix.

There is some evidence that the composition of financial services in communities relates to modest-**income households' emergency savings. That is, the composition of banks, credit** unions, and AFS providers in communities may play some role in helping these households anticipate and prepare for financial emergencies. The probability of saving for emergencies increases by 4% when modest-income households are located in communities with at least equal

[3] Please note that the analyses to produce the findings in this report used linear regression and the relationships that were tested were correlational.

densities of different types of financial services, when compared to living in communities where AFS providers outnumber bank and credit union branches.

Accessing Credit

A household can use credit to adjust to changing financial circumstances and thereby become more resilient to circumstances that would otherwise threaten their financial health. Credit cards—the most common form of consumer credit—can help households smooth consumption when their hours are reduced at work or they need to cover the cost of an unexpected car repair (Karlan & Zinman, 2010; Lusardi, Schnieder, & Tufano, 2011). When monthly payments are made in full and on time, credit cards help households establish their credit history and achieve higher credit scores (Simon, 2015). Good credit scores can provide households the opportunity to access other sources of low-cost, high-quality credit like mortgages or small business loans to establish and grow wealth.

> *For modest-income households, the composition of financial services within their communities may make a difference in their ability to open lines of credit.*

For modest-income households, the composition of financial services in their communities may make a difference in their ability to access credit. The probability of owning a credit card increases by 2% when modest-income households are located in communities with densities of bank and credit union branches that equal or outnumber those of AFS providers when compared to being located in communities with higher densities of AFS providers.

Having an Insurance Safety Net

Insurance coverage can also provide households with resilience when confronted with the unexpected expenses associated with medical bills, car accidents, or deaths (Larrimore, Arthur-Bentil, Dodini, & Thomas, 2015). Health insurance covers the cost of catastrophic medical events that could otherwise result in high out-of-pocket expenditures and increases the likelihood of receiving preventive care for health conditions that impact the ability to work (Baicker et al., 2013). Similarly, the financial consequences from the death of a spouse or partner may be partially allayed in the longer-term by having annuitized life insurance payouts (Harris & Yelowitz, 2016).

> *Lowest- and modest-income households may be more likely to have health and life insurance when their communities have greater densities of banks and credit unions than AFS providers.*

The densities and compositions of financial services relate to lower-**income households' health** and life insurance coverage. In terms of the density of financial services, we found that for each additional bank or credit union branch per 1,000 population, the probability of lowest-income

households having health insurance rises by 12%, whereas this probability falls by 8% for each additional AFS provider. Similarly, when we looked at the composition of financial services, we found associations with the health insurance status for lowest- and modest-income households. More specifically, the probability of having health insurance was associated with a 2% increase 2% for both lower-and modest-income households when the densities of bank and credit union branches outnumber AFS service providers.

The Change in Probability that a Lowest-Income Household has Health Insurance

Note: This figure presents findings from the correlational relationships between financial services densities and lowest-**income households'** (*N* = 8,535) health insurance status from the 2012 National Financial Capability Study (NFCS). The complete analysis is available in the technical appendix.

The probability of having health insurance increases by 2% when lowest-income households are located in communities where densities of bank and credit union branches outnumber AFS providers. The probability of having health insurance increases by 2% when modest-income households are located in communities where densities of bank and credit union branches outnumber AFS providers, compared to the opposite composition of densities.

There is a similar pattern of findings for life insurance. The probability of having life insurance increases when lowest-income households are located in communities where densities of bank and credit union branches equal or outnumber AFS providers compared to being located in communities with higher densities of AFS—11% or 8%, respectively.

Meeting Short-Term Financial Goals

Households can use the products and services provided by banks and credit unions, such as checking or savings accounts and lines of credit, for meeting their financial goals. In fact, one of **households' first financial goals is to save for emergencies (Pew Charitable Trusts, 2015).** Households can open an account to save in advance of financial emergencies or open a credit card that can be used to smooth their consumption when emergencies arise. Likewise, households can also use AFS providers like payday lenders and check cashers to adjust to changing financial circumstances; though, the high costs associated with these **lenders'** products and services may push **households' financial goals** farther out of reach.

The concentration of financial services within communities relates to lowest-income **households' abiliti**es to meet short-term financial goals, and helps them to develop resilient

financial health. The probability of meeting short-term savings goals increases by 19% when lowest-income households are located in communities where densities of bank and credit union branches equal those of AFS providers compared to being located in communities with higher densities of AFS providers. Similarly, the probability increases by 16% when they live in communities where the densities of bank and credit union branches outnumber AFS providers.

> *When lowest-income households are located in communities with densities of bank and credit union branches outnumbering those of AFS providers, the probability of meeting short-term savings goals rises by 16%.*

The Change in Probability that a Lowest-Income Household Reports Meeting their Short-Term Savings Goals
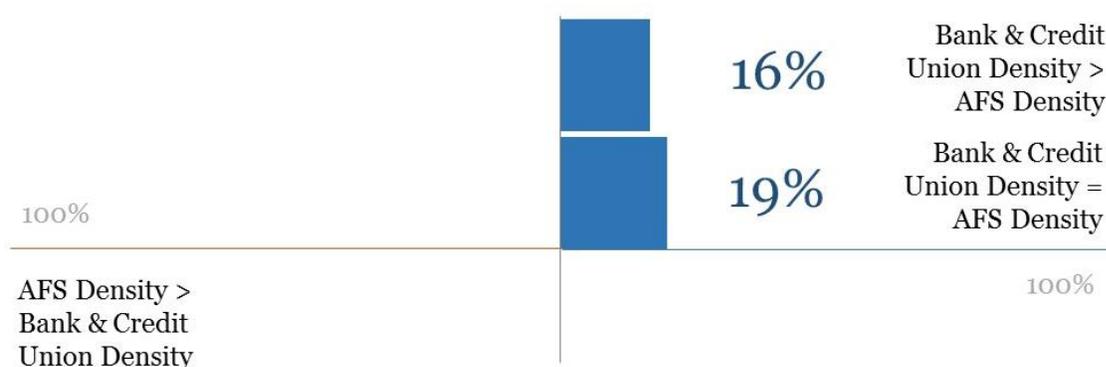
Note: This figure presents findings from the correlational relationships between financial services densities and lowest-income households' (*N* = 1,478) abilities to meet short-term savings goals from the 2014 Consumer Financial Health Study (CFHS). The complete analysis is available in the technical appendix.

Discussion

In this brief, we present findings on the relationship between the presence of financial services within communities and the **multiple indicators of households'** resilient financial health. There are three noteworthy patterns that emerge from these findings. The first pattern is that financial services are associated with the resilient financial health of lowest- and modest-income households, which suggests that these households may be more sensitive to the availability and concentration of financial services in their communities than those with greater income.

The second pattern is that different types of financial services have distinct relationships with **households' financial health.** On one hand, the presence of banks and credit unions tends to be **associated with households' more resilient financial health** and has clear associations with saving for emergencies or accessing credit. On the other hand, the presence of AFS providers tends to be associated with **households'** less resilient financial health, which can be inferred from reductions in health insurance coverage among those in communities dominated by AFS services. This is consistent with previous evidence suggesting that greater availability or closer

geographic proximity of AFS providers, such as payday lenders, can lead to **households'** increased use of these high-cost services and impede their financial health (Bhutta, 2014; Bhutta, Skiba, & Tobacman, 2015; Friedline & Kepple, 2016).

The third pattern of import is that the relationship between financial services and indicators of **resilient financial health depends on households' income levels.** Financial services relate to emergency savings and credit access for modest-income households, whereas, for lower-income households, financial services relate to insurance coverage and short-term savings goals. It may be that the presence of banks and credit unions augment modest-**income households' resilient** financial health because the modest-income group could be better poised to leverage these services to their benefit than households with the lowest incomes.

Limitations

Readers should be aware of certain limitations concerning data and findings in this brief. First, these findings should not be interpreted as causal. That is, an association between availability of financial services and household financial health does not mean, for example, that having a certain density of banks in **a household's** community means that the household will save more money. Other factors not available in the data are likely at play, such as whether these financial services are used and whether the products themselves are affordable. Factors that affect use of financial services and affordability of their products can include having checking accounts closed due to overdrafting (Campbell, Jerez, & Tufano, 2008) and insufficient funds to meet minimum monthly account balance requirements (FDIC, 2016).

Second, though the household financial data are drawn from nationally representative samples, zip code-level data on financial services densities differ somewhat from the data for the nation as a whole. For example, the average bank and credit union density for zip codes in the NFCS data is .19 per 1,000 population, which is somewhat lower than the average bank and credit union density for all zip codes, which is .33 per 1,000 population.

Finally, concerning AFS, data were available for 2015 and not matched to the years that household financial data were collected in 2012 and 2014. The available data also do not allow us to make a distinction between credit-related AFS like payday loans and transaction-related AFS like check cashing. The data do not allow us to consider this distinction, even though payday loans are potentially more damaging to household financial health than check cashing.

Conclusion

This geographic investigation provides some evidence that financial services within households' communities—particularly for households with the lowest incomes—may be important for their financial resilience. A geographic investigation does not refute the potential of mobile banking for expanding financial access, which is not confined to a community or specific geographic space. Instead, this investigation helps us to further understand how households make use of the financial services that are available to them in their communities, whether any investments **into communities' financial services availability are warranted, and which households might**

experience the greatest benefits from these investments. This research is only a first step toward considering these possibilities.

Technical Appendix

Data Sources

This study used several sources of data to test associations between the financial services within **individuals' and/or households' residential communities and their financial health, including** the 2012 National Financial Capability Study (NFCS), 2014 Consumer Financial Health Study (CFHS), Federal Deposit of Insurance Corporation (FDIC), National Credit Union Association **(NCUA), Esri Business Analyst, and US Census Bureau's American Community Survey (ACS).** Zip codes served as a proxy for communities given that zip codes are units defined by the US Postal Service and that use of geographic space (i.e., activity space) is larger than smaller geographic units such as census blocks (Crawford, Jilcott Pitts, McGuirt, Keyserling, & Ammerman, 2014).

Financial health data were drawn from the 2012 NFCS and 2014 CFHS. The 2012 NFCS was commissioned by the FINRA Investor Education Foundation and was completed online by a sample of 25,509 adults in the United States between July and October 2012. Additional information regarding the 2012 NFCS is available from the FINRA Investor Education Foundation. The 2014 CFHS was commissioned by the Center for Financial Services Innovation (CFSI) and was completed in partnership with GfK by a sample of 7,152 adults in the United States between June and August 2014. Additional information regarding the 2014 CFHS is available in a published report by CFSI (Gutman, Garon, Hogarth, & Schneider, 2015).

Measures

Financial services density. Financial services data were collected through several sources. The FDIC and NCUA provided data for bank and credit union branch locations, including their **street addresses and zip codes. Bank branch locations were collected through the FDIC's** summary of deposits, which provided quarterly information on all bank and bank branch locations. Credit union branch locations were collected through the NCUA call reports, which provided quarterly information on all credit union and credit union branch locations. Bank and credit union branch location data were retrieved from the first quarters in 2012 and 2014. Branch location data from 2012 were used with the 2012 NFCS and data from 2014 were used with the 2014 CFHS.

Data by zip code on alternative financial service locations and market potential were collected from 2015 Esri Business Analyst Geographic Information System (GIS). Unfortunately, Esri Business Analyst only maintains current year data, meaning that it was not possible to collect archived AFS data from 2012 or 2014 that corresponded with the timing of the NFCS or CFHS survey data collection. Information on changes in AFS locations between 2012, 2014, and 2015 was unavailable; however, there is reason to believe that any changes during these years would have been small and would not have substantially altered our results. Major state regulatory policies that could have impacted AFS locations were implemented during the preceding decade before our data were collected (Bhutta, 2014). Moreover, substantial changes have typically

occurred over longer time periods such as 10 years or more and any dramatic changes were likely confined to the Great Recession through 2011 (Agarwal, Gross, & Mazumder, 2016). Twelve codes from the North American Industry Classification Systems (NAICS) were used to identify alternative financial services and included auto title loan, payday loan, check cashing, tax refund, pawn shop, and rent-to-own services.

Density measures were calculated by aggregating the locations of bank and credit union branches and alternative financial services within zip codes and calculating their total numbers of locations per 1,000 population. Zip codes with no matching density measure were considered to not have any post offices, bank and credit union branches, or alternative financial services within their communities. Densities were capped at the 99th percentile. Density measures were merged with household financial health data using zip codes. In the NFCS data, there were 10,207 zip codes (32% of all residential zip codes in the US), and an average of 2.5 households per zip code (*SD* = 3.21; range: 1 to 54). In the CFHS data, there were 5,298 zip codes (17% of all residential zip codes in the US), and an average of 1.4 households per zip code (*SD* = 0.68; range: 1 to 6).

State regulation of payday lenders. Given that regulation may have played a role in the density of AFS within a zip code and **a household's** use of these services (Bhutta, 2014; Melzer, 2011), the states in which individual respondents lived were coded for their regulation of payday lenders in 2011 (no regulation = 0; light or heavy regulation = 1; prohibited regulation = 2). The measure **for a community's density of** AFS was more comprehensive than just payday lending services, also including auto title loans, check cashers, tax refunds, pawn shops, and rent-to-own stores that may not have been affected by payday lending regulation. However, in some cases individuals have been found to adjust their use of AFS depending on the regulatory environment (Friedline & Kepple, 2016), and perhaps rely more often on auto title loans or pawn shops where payday lenders are prohibited (Carter, 2015; McKernan, Ratcliffe, & Kuehn, 2013).

Individual and/or household demographics. Individual and/or household demographic variables previously found to have associations with financial health were taken from the 2012 NFCS and 2014 CFHS and controlled in the analyses. These variables included age, gender, race, gender, presence of children in the household, marital status, education level, employment status, annual household income (lowest < $35,000 *N* = 9,250; modest $35,000 to < $75,000 *N* = 8,616; highest ≥ $75,000 *N* = 7,643), financial literacy, and bank account ownership.

Community demographics. Additional community demographic data were collected from the **US Census Bureau American Community Survey's (ACS) 2010 to 2014 five**-year estimates and Esri Business Analyst. These data provided aggregate population estimates by Census Bureau zip code tabulation areas (ZCTAs), which were cross-walked to zip codes. Population density equaling 1,000 residents per square mile was controlled in order to account for the variation in geographic size across zip codes. These variables also measured the percent of the population that was of different racial groups, was unemployed, and was living in poverty. For example, the US Census Bureau calculated the unemployment rate dividing the total number of the unemployed by the total number of the population ages 16 years and older who reported

participating in the labor force. These data also included whether the zip code was located within urban clusters or towns.

The market potential or local consumption rate of savings accounts and smartphones were **included, which were collected from 2015 Esri Business Analyst. Zip codes' marke**t potential was defined as the expected number of consumers who had savings accounts or used smartphones divided by the total number of adults. The use of smartphones served as a proxy for the potential **of mobile banking within a household's community.**

Analysis Plan

Linear regression was the primary analytic tool used to assess statistical significance for the relationship between densities of financial services and financial health. Logistic, multiple, and zero-inflated negative binomial regression in Stata version 12 were used to predict financial **health outcomes. Regression coefficients and predicted probabilities using Stata's .***margins, atmeans* command were used to report statistical significance.

Propensity score weighting was used for analyses of financial health based on whether households were in one of three types of communities, where (1) bank and credit union branch density < alternative financial services density; (2) bank and credit union branch density = alternative financial services density; and (3) bank and credit union branch density > alternative financial services density. Financial health may differ based on the relative availability of different types of financial services in one's community. To examine this possibility, we used propensity score weighting to adjust for differences in household characteristics among these three types of communities that otherwise might explain differences in financial health (Guo & Fraser, 2010; Imbens, 2000). First, we examined differences in household characteristics for the three types of communities. Next, we used multinomial logit regression to predict the probablities of living in each of the three communities based on differences in household characteristics that were statistically significant (Guo & Fraser, 2010). Lastly, we used these predicted probabilities to calculate average treatment-effect-for-the-treated (ATT) propensity score weights which were used in analyses to balance the three types of communities. Models incorporated robust standard errors to adjust for correlations among households in the same zip code.

Results

A summary of the results is provided here and complete results are available upon request.

Anticipating financial emergencies. With regard to emergency savings, data from the 2012 NFCS were used (see Table 1). Participants responded to a question that asked whether or not they were saving for emergencies. Among modest-income households (n = 7,937), bank and credit union density and AFS density per 1,000 population were not significantly associated with their saving for emergencies. Compared to AFS densities that outnumbered those of banks and credit unions, having equal or greater densities of banks and credit unions was positively related at trend level to modest-**income households'** emergency savings (respectively, β = .177; SE =

.102; Pr = .042; *p* < .10 and **β = .129**; SE = .071; Pr = .030; *p* < .10). There were no significant associations among lowest-income (*n* = 8,382) or highest-income (*n* = 7,157) households.

Table 1. Emergency Savings

	Lowest-Income Households		Modest-Income Households			Highest-Income Households	
	β (SE)		β (SE)		Pr	β (SE)	
Bank and credit union density	.258	(.180)	.076	(.156)		−.090	(.185)
AFS density	−.069	(.239)	.380	(.231)		.046	(.293)
Model	−2.551***	(.376)	−2.971***	(.389)		−2.261***	(.533)
Pseudo R²	.060		.080			.101	
Financial services density (Reference: Banks and credit unions < AFS)							
Banks and credit unions = AFS	.104	(.101)	**.177†**	**(.102)**	.042	−.115	(.105)
Banks and credit unions > AFS	.068	(.077)	**.129†**	**(.071)**	.030	.032	(.082)
Model	−1.170	(.440)	−2.421	(.638)		−3.226	(.716)
Pseudo R²	.166		.102			.111	
N		8,382		7,937			7,157

Source: Data from the 2012 National Financial Capability Study (NFCS).
Notes: Participants responded to a question that asked whether or not they were saving for emergencies. Logistic regression analyses controlled for community and individual and/or household demographics and state regulation of payday lenders. Models with categorizations of financial service density were weighted using the average treatment-effect-for-the-treated (ATT) propensity score weights to adjust for observed selection. Analyses only undertaken with NFCS data; a corresponding variable measuring **whether or not households were saving for emergencies is not available in CFHS data.** β = regression coefficients. Robust SE = robust standard error. Pr = predicted probability. * *p* < .05; ** *p* < .01; *** *p* < **.001;** † *p* < .10

Accessing credit. With regard to accessing credit, data from the 2012 NFCS were used (see Table 2). Participants responded to a question that asked whether or not they owned a credit card. Among modest-income households (*n* = 8,110), bank and credit union density and AFS density per 1,000 population were not significantly associated with their credit card ownership. Compared to AFS densities that outnumbered those of banks and credit unions, having equal or greater densities of banks and credit unions was positively related to modest-income **households' credit card ownership (respectively, β = .212; SE = .124; Pr = .021;** *p* < **.10** and β = .169; SE = .084; Pr = .017; *p* < .05). There were no significant associations among lowest-income (*n* = 8,382) or highest-income (*n* = 7,258) households.

Table 2. Credit Card Ownership

	Lowest-Income Households		Modest-Income Households			Highest-Income Households	
	β (SE)		β (SE)		Pr	β (SE)	
Bank and credit union density	.385	(.368)	.185	(.207)		.385	(.368)
AFS density	.420	(.580)	−.348	(.281)		.420	(.580)

Model	−3.871***	(.808)	−3.056***	(.441)		−3.871***	(.808)
Pseudo R²	.170		.102			.170	

Financial services density (Reference: Banks and credit unions < AFS)							
Banks and credit unions = AFS	−.035	(.202)	.212†	(.124)	.021	−.035	(.202)
Banks and credit unions > AFS	−.051	(.157)	.169*	(.084)	.017	−.051	(.157)
Model	−2.444***	(.982)	−4.011***	(.550)		−2.444*	(.982)
Pseudo R²	.147		.144			.147	

N	8,382	8,110	7,258

Source: Data from the 2012 National Financial Capability Study (NFCS).
Notes: Participants responded to a question that asked whether or not they owned a credit card. Logistic regression analyses controlled for community and individual and/or household demographics and state regulation of payday lenders. Models with categorizations of financial service density were weighted using the average treatment-effect-for-the-treated (ATT) propensity score weights to adjust for observed selection. Analyses undertaken with CFHS data reveal findings that are consistent with the significant relationships between financial services density and credit card ownership. β = regression coefficients. Robust SE = robust standard error. Pr = predicted probability. * $p < .05$; ** $p < .01$; *** $p < .001$; † $p < .10$

Having an insurance safety net. With regard to having an insurance safety net, data from the 2012 NFCS and 2014 CFHS were used (see Tables 3 and 4). Participants responded to separate questions that asked whether or not they had health and life insurance. Among lowest-income households ($n = 8,535$), bank and credit union density was positively associated with having health insurance while AFS density was negatively associated at trend level with having health insurance (respectively, β = .550; SE = .160; Pr = .122; $p < .01$ and β = −.358; SE = .204; Pr = −.080 $p < .10$).

Compared to AFS densities that outnumbered those of banks and credit unions, having greater densities of banks and credit unions was positively related to lowest- and modest-income households' ($n = 8,160$) health insurance (respectively, β = .142; SE = .067; Pr = .025; $p < .05$ and β = .193; SE = .091; Pr = .019; $p < .05$). There were no significant associations among highest-income ($n = 7,321$) households.

The only evidence that financial services related to life insurance was among lowest-income households ($n = 1,344$; see Table 4). Compared to AFS densities that outnumbered those of banks and credit unions, having equal and greater densities of banks and credit unions was positively related to lowest-income households' life insurance (respectively, β = .464; SE = .223; Pr = .108; $p < .05$ and β = .327; SE = .171; Pr = .076; $p < .10$). There were no significant associations among modest-income ($n = 1,269$) or highest-income ($n = 2,264$) households.

Table 3. Health Insurance

	Lowest-Income Households		Modest-Income Households		Highest-Income Households
	β (SE)	Pr	β (SE)	Pr	β (SE)
Bank and credit union density	.550** (.160)	.122	−.282 (.211)		.578 (.462)

	Lowest-Income β (SE)	Pr	Modest-Income β (SE)	Pr	Highest-Income β (SE)
AFS density	−.358† (.204)	−.080	.251 (.313)		−.689 (.634)
Model	−1.661*** (.318)		−1.716*** (.473)		−1.839† (.950)
Pseudo R²	.097		.092		.161
Financial services density (Reference: Banks and credit unions < AFS)					
Banks and credit unions = AFS	−.035 (.093)		.076 (.134)		−.007 (.241)
Banks and credit unions > AFS	.142* (.067)	.025	.193* (.091)	.019	.142 (.178)
Model	−1.621*** (.402)		−1.628*** (.641)		−1.588 (1.193)
Pseudo R²	.396		.126		.153
N	8,535		8,160		7,321

Source: Data from the 2012 National Financial Capability Study (NFCS).
Notes: Participants responded to a question that asked whether or not they had health insurance. Logistic regression controlled for community and individual and/or household demographics and state regulation of payday lenders. Models with categorizations of financial service density were weighted using the average treatment-effect-for-the-treated (ATT) propensity score weights to adjust for observed selection. Analyses undertaken with CFHS data reveal findings that are consistent with the significant relationships between **financial services density and health insurance. β = regression coefficients. Robust SE = robust standard** error. Pr = predicted probability. * $p < .05$; ** $p < .01$; *** $p < .001$; † $p < .10$

Table 4. Life Insurance

	Lowest-Income Households β (SE)	Pr	Modest-Income Households β (SE)		Highest-Income Households β (SE)	
Bank and credit union density	−.796 (.531)		.101 (.523)		−.686 (.439)	
AFS density	−.673 (.543)		−.702 (.565)		−.519 (.509)	
Model	−1.493† (.793)		−1.006 (.944)		−.528 (.876)	
Pseudo R²	.071		.048		.076	
Financial services density (Reference: Banks and credit unions < AFS)						
Banks and credit unions = AFS	.464* (.223)	.108	−.187 (.213)		−.150 (.241)	
Banks and credit unions > AFS	.327† (.171)	.076	.002 (.161)		.024 (.158)	
Model	−3.604** (1.129)		−.799 (1.245)		.620 (1.233)	
Pseudo R²	.084		.078		.186	
N	1,344		1,269		2,264	

Source: Data from the 2014 Consumer Financial Health Study (CFHS).
Notes: Participants responded to a question that asked whether or not they had life insurance. Logistic regression controlled for community and individual and/or household demographics and state regulation of payday lenders. Models with categorizations of financial service density were weighted using the average treatment-effect-for-the-treated (ATT) propensity score weights to adjust for observed selection. Analyses undertaken with NFCS data reveal findings that are mostly consistent with the significant relationships **between financial services density and life insurance. β = regression coefficients. Robust SE = robust** standard error. Pr = predicted probability. * $p < .05$; ** $p < .01$; *** $p < .001$; † $p < .10$

Meeting short-term financial goals. With regard to meeting short-term financial goals, data from the 2014 CFHS were used (see Table 5). Participants responded to a five-point Likert scale question that asked them to rate their confidence in meeting short-term saving goals. Among lowest-income households (*n* = 1,478), neither bank and credit union density nor AFS density was associated with confidence in meeting short-term savings goals. However, compared to AFS densities that outnumbered those of banks and credit unions, having equal and greater densities of banks and credit unions was positively related to lowest-income **households'** confidence in meeting these short-term goals (respectively, **β = .**196; SE = .096; *p* < .05 and **β = .**161; SE = .072; *p* < .05). There were no significant associations among modest-income (*n* = 1,343) or highest-income (*n* = 2,379) households.

Table 5. Short-Term Savings Goals

	Lowest-Income Households		Modest-Income Households		Highest-Income Households	
	β (SE)		β (SE)		β (SE)	
Bank and credit union density	.179	(.241)	.069	(.225)	.086	(.151)
AFS density	−.310	(.240)	−.170	(.250)	.148	(.180)
Model	1.581	(.367)	2.482	(.412)	1.887	(.317)
Pseudo R²	.027		.048		.054	
Financial services density (Reference: Banks and credit unions < AFS)						
Banks and credit unions = AFS	.196*	(.096)	.055	(.097)	−.018	(.062)
Banks and credit unions > AFS	.161*	(.072)	−.037	(.072)	.048	(.050)
Model	1.955***	(.510)	2.681	(.512)	1.807	(.360)
Pseudo R²	.061		.071		.078	
N		1,478		1,343		2,379

Source: Data from the 2014 Consumer Financial Health Study (CFHS).
Notes: Participants responded to a five-point Likert scale question that asked them to rate their confidence in meeting short-term saving goals. Multiple regression analyses modeled the continuous responses and controlled for community and individual and/or household demographics and state regulation of payday lenders. Models with categorizations of financial service density were weighted using the average treatment-effect-for-the-treated (ATT) propensity score weights to adjust for observed selection. Analyses only undertaken with CFHS data; a corresponding variable is not available in NFCS data. β = regression coefficients. Robust SE = robust standard error. * *p* < .05; ** *p* < .01; *** *p* < **.001;** † *p* < .10

References

Agarwal, S., Gross, T., & Mazumder, B. (2016). H*ow did the Great Recession affect payday loans?* Chicago, IL: The Federal Reserve Bank of Chicago.

Baicker, K., Taubman, S. L., Allen, H. L., Bernstein, M., Gruber, J. H., Newhouse, J. P., ... & Finkelstein, A. N. (2013). The Oregon experiment—effects of Medicaid on clinical outcomes. *New England Journal of Medicine*, *368*(18), 1713-1722.

Bhutta, N. (2014). Payday loans and consumer financial health. *Journal of Banking & Finance, 47*, 230-242. doi:10.1016/j.jbankfin.2014.04.024

Bhutta, N., Skiba, P., & Tobacman, J. (2015). Payday loan choices and consequences. *Journal of Money, Credit, and Banking, 47*(2-3), 223-260. doi:10.1111/jmcb.12175

Campbell, D., Jerez, A. M., & Tufano, P. (2008). *Bouncing out of the banking system: An empirical analysis of involuntary bank account closures.* Retrieved from http://joinbankon.org/resources/bouncing_out_of_the_banking_system_an_empirical_analysis_of_involuntary_bank_account_closures

Carter, S. (2015). Payday loan and pawnshop usage: The impact of allowing payday loan rollovers. *Journal of Consumer Affairs, 49*(2), 436-456. doi:10.1111/joca.12072

Crawford, T., Jilcott Pitts, S., McGuirt, J., Keyserling, T., & Ammerman, A. (2014). Conceptualizing and comparing neighborhood and activity space measures for food environment research. *Health & Place, 30*, 215-225. doi:10.1016/j.healthplace.2014.09.007

Federal Deposit Insurance Corporation. (2016). *2015 National survey of unbanked and underbanked households.* Washington, DC: FDIC. Retrieved from https://www.fdic.gov/householdsurvey/2015/2015report.pdf

Friedline, T., & Kepple, N. (2016). Does community access to alternative financial services relate to individuals' use of these services? Beyond individual explanations. *Journal of Consumer Policy.* doi:10.1007/s10603-016-9331-y

Gjertson, L. (2016). Emergency saving and household hardship. *Journal of Family and Economic Issues*, *37*(1), 1-17.

Grinstein-Weiss, M., Despard, M., Guo, S., Russell, B., Key, C., & Raghavan, R. (2016). Do tax-time savings deposits reduce hardship among low-income filers? A propensity score analysis. *Journal of the Society for Social Work and Research*, *7*(4), 000-000.

Guo, S., & Fraser, W. M. (2010). *Propensity score analysis: Statistical methods and applications.* Thousand Oaks: CA, Sage Publications, Inc.

Gutman, A., Garon, T., Hogarth, J., & Schneider, R. (2015). *Understanding and improving consumer financial health in America.* Chicago, IL: CFSI.

Harris, T. F., & Yelowitz, A. (2016). Life insurance holdings and well-being of surviving spouses. *Available at SSRN 2755241.*

Imbens, G. W. (2000). The role of the propensity score in estimating dose–response functions. *Biometrika, 87*(3), 706-710. doi:10.1093/biomet/87.3.706

Karlan, D., & Zinman, J. (2010). Expanding credit access: Using randomized supply decisions to estimate the impacts. *The Review of Financial Studies, 23*(1), 433-464.

Lusardi, A., Schneider, D., & Tufano, P. (2011). *Financially fragile households: Evidence and implications*. Washington, DC: Brookings Institution. Retrieved from https://www.brookings.edu/wp-content/uploads/2011/03/2011a_bpea_lusardi.pdf

Larrimore, J., Arthur-Bentil, M., Dodini, S., & Thomas, L. (2015). Report on the economic well-being of U.S. households in 2014. Retrieved from https://www.federalreserve.gov/econresdata/2014-report-economic-well-being-us-households-201505.pdf

McKernan, S-M., Ratcliffe, C., & Kuehn, D. (2013). Prohibitions, price caps, and disclosures: A look at state policies and alternative financial product use. *Journal of Economic Behavior and Organization, 95*, 207-223. doi:10.1016/j.jebo.2013.05.012

Melzer, B. (2011). The real costs of credit access: Evidence from the payday lending market. *The Quarterly Journal of Economics, 126*(1), 517-555. doi:10.1093/qje/qjq009

Pew Charitable Trusts. (2015). *How do families cope with financial shocks? The role of emergency savings in family financial security*. Washington, DC: Pew Charitable Trusts, Financial Security and Mobility Project. Retrieved from http://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2015/10/the-role-of-emergency-savings-in-family-financial-security-how-do-families

Simon, J. (2015, June). *FICO's 5 factors: The components of a FICO credit score*. CreditCards.com. Retrieved from http://www.creditcards.com/credit-card-news/help/5-parts-components-fico-credit-score-6000.php