

Research Paper

Pulse Points Spring 2024: Financial Health Challenges in Banking Deserts

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Authors

Kennan Cepa, *Director, Policy & Research*

Wanjira Chege, *Associate, Policy & Research*

Necati Celik, *Manager, Policy & Research*

About the Financial Health Pulse® and Pulse Points

Since 2018, the Financial Health Network has conducted the Financial Health Pulse® research initiative. The Financial Health Pulse combines probability-based, longitudinal survey data with administrative data, with the goal of providing regular updates and actionable insights about the financial lives of Americans.

Pulse Points are short research reports released multiple times a year as part of the Financial Health Pulse research initiative. Pulse Points are designed to explore specific, timely topics related to financial health. For more of our Financial Health Pulse research, including Pulse Points on student loans, natural disasters, and more, please see

<https://finhealthnetwork.org/programs/financial-health-pulse/>.

Our Funder

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Introduction

There is considerable energy and enthusiasm in the financial sector for promoting financial health among people living in the United States.^{1,2} Growing momentum around financial health has resulted in the introduction of new financial health products and services among financial institutions.³ Consumers may access these financial tools and services either through in-person options or via the internet.⁴ Yet the number of communities without any physical bank branches, sometimes called banking deserts, has increased by 6.4% in the wake of the pandemic.^{5,6,7,8} In addition, accessing internet-based banking services depends on the availability of reliable, high-speed, and secure internet, which is not guaranteed.^{9,10}

To date, less is known about the financial health of consumers with limited online or in-person banking services in their community.¹¹ By taking into account both bank branch locations and broadband availability, this study provides a more comprehensive depiction of banking deserts and the consumers living in affected communities, **finding that 25 million consumers live without either online or in-person banking services in their community.** By documenting the financial lives of individuals living in these communities, this study shows that **residents of online and in-person banking deserts face financial health challenges.** The study concludes with **recommendations for financial institutions, community organizations, and other stakeholders.**

¹ Jennifer Tescher, Heidi Johnson, & Riya Patil, "[Measurement for Systems Change: Lessons From the Financial Health Pulse®](#)," Financial Health Network, February 2024.

² Stephen Arves, Marisa Walster, & Nadia van de Walle, "[Building Valuable Customer Relationships Through Financial Health](#)," Financial Health Network, 2020.

³ MK Falgout & Zaan Pirani, "[BECU: Leading With Data To Advance Financial Health](#)," Financial Health Network, December 2023.

⁴ "[2021 FDIC National Survey of Unbanked and Underbanked Households](#)," Federal Deposit Insurance Corporation, October 2022.

⁵ Alaina Barca & Harry Hou, "[U.S. Bank Branch Closures and Banking Deserts](#)," Federal Reserve Bank of Philadelphia, February 2024.

⁶ Jad Edlebi, Bruce C. Mitchell, & Jason Richardson, "[The Great Consolidation of Banks and Acceleration of Branch Closures Across America: Branch Closure Rate Has Doubled During the Pandemic](#)," National Community Reinvestment Coalition, February 2022.

⁷ Kimberly Kreiss, "[Bank Branches and COVID-19: Where are Banks Closing Branches during the Pandemic?](#)" Board of Governors of the Federal Reserve System, last updated December 2021.

⁸ Jason Richardson & Adam Rust, "[ABANDON SHIP: How Banks Closed Their Doors As US Economy Reopened](#)," National Community Reinvestment Coalition, December 2022.

⁹ Geng Niu, XiaoShu Jin, Qi Wang, & Yang Zhou, "[Broadband infrastructure and digital financial inclusion in rural China](#)," China Economic Review, December 2022.

¹⁰ "[Definitions](#)," National Digital Inclusion Alliance.

¹¹ Throughout this study, we use the phrases "broadband desert" and "online banking desert" interchangeably to describe communities with lower-than-recommended broadband coverage. To differentiate from online banking deserts, we use the phrases "in-person banking desert" and "physical banking deserts" interchangeably to refer to areas that do not have an in-person bank branch.

25 Million Consumers Live in Online or In-Person Banking Deserts

We identify consumers living in four types of communities using data from the Financial Health Pulse[®] 2023 survey, data collected by the Federal Communications Commission (FCC) from reports provided by broadband service providers, and data on the location of FDIC-insured bank branches.^{12, 13, 14}

The first type of community is composed of individuals living where online and in-person banking services are both available, or communities with available banking services. The second includes residents of in-person banking deserts, or communities without in-person bank branches. The third type of community, online banking deserts, are residents of areas where broadband is not available or only available at speeds below the newly established FCC benchmark.^{15, 16, 17} Finally, we identify communities where neither in-person nor online banking is available to residents. (Please see the Appendix for more information on how we identified these communities in our data.)

Pulse data show that 8 million consumers, or 3% of adults living in the United States, live in in-person banking deserts (Figure 1).¹⁸ An additional 15 million consumers (6%) live in online banking deserts. Two million more consumers (1%) live in communities with neither in-person nor online banking services available to them. All together, this represents at least **25 million consumers, or 10% of American adults, living without either in-person or online banking options in their communities.**

A deeper investigation of these communities highlights how often in-person and online deserts overlap with each other. **Nearly a quarter (22%) of individuals living in areas without bank branches also did not have broadband available in their community,** which is three times more than the share of individuals who have bank branches in their communities (6%) (analyses not shown). Given that residents of communities without bank branches are also more often

¹² The Financial Health Pulse survey was fielded between April 27, 2023 and June 11, 2023 to panelists of the University of Southern California's [Understanding America Study](#) (UAS).

¹³ ["Fixed Broadband Deployment Data from FCC Form 477 US - Fixed without Satellite - Dec 21,"](#) Federal Communications Commission, December 2022.

¹⁴ ["BankFind Suite: Find Institutions by Name & Location,"](#) Federal Deposit Insurance Corporation, November 2023.

¹⁵ Scott J. Savage & Donald Waldman, ["Broadband Internet access, awareness, and use: Analysis of United States household data,"](#) Telecommunications Policy, September 2005.

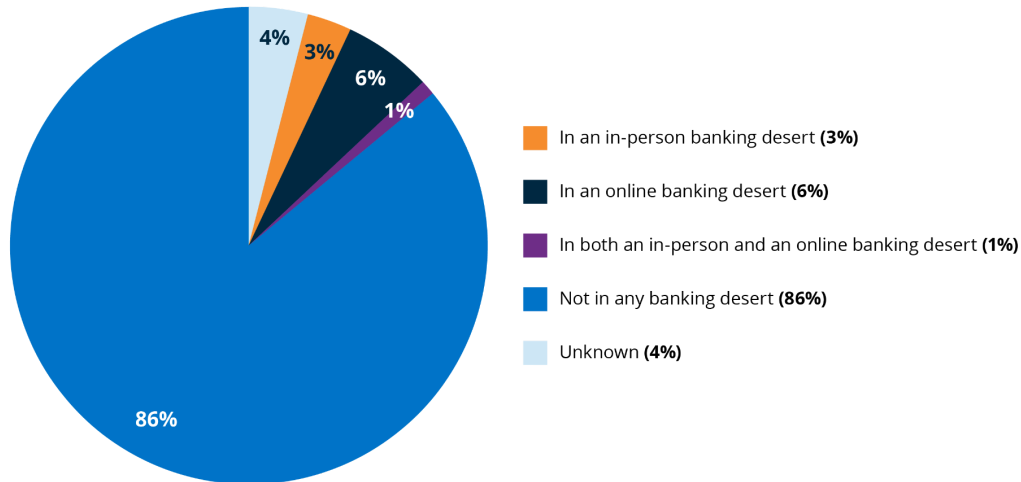
¹⁶ Geng Niu, XiaoShu Jin, Qi Wang, & Yang Zhou, ["Broadband infrastructure and digital financial inclusion in rural China,"](#) China Economic Review, December 2022.

¹⁷ The FCC recently approved 100/20 Mbps at the minimum speed for high-speed broadband internet. The previous standard speed was 25/3 Mbps.

¹⁸ Calculated based on the total adult population in the U.S., as reported in the [2021 ACS 5-Year Estimates](#).

communities without available broadband, online banking options may not be a perfect solution for improving access to financial services in in-person banking deserts.

Figure 1. 1 out of every 10 Americans live in an online or in-person banking desert.
Percentage of people living in communities with and without banking services available.



Note: N = 8,264

In the remainder of this report, we focus on residents of in-person banking deserts, those living in online banking deserts, and communities that are not deserts. We do not report further results for residents of communities with neither in-person bank branches nor broadband available to them because our sample size is too small to be confident of findings for these consumers. That said, we suspect that financial health challenges experienced by these consumers are similar to those experienced by residents of either in-person or online banking deserts.

Characteristics of consumers living in banking and broadband deserts.

We find that consumers living in either in-person or online banking deserts differ from residents of communities with banking services available across a number of dimensions.

Consumer characteristic	Residents of in-person banking deserts	Residents of online banking deserts
Census region	Disproportionately found in Western states	Disproportionately found in Southern and Midwestern states
Urbanicity	More often found in rural areas	More often found in rural areas
Race and ethnicity	Disproportionately identify as White	Disproportionately identify as White
Household income	Less frequently have household incomes of \$100,000 or more	Less frequently have household incomes of \$100,000 or more; More frequently have household incomes of less than \$30,000
Age	Less frequently 18 to 25 years old	Less frequently 18 to 25 years old; More often 65 and older
Disability status	More frequently reported having a disability	More frequently reported having a disability

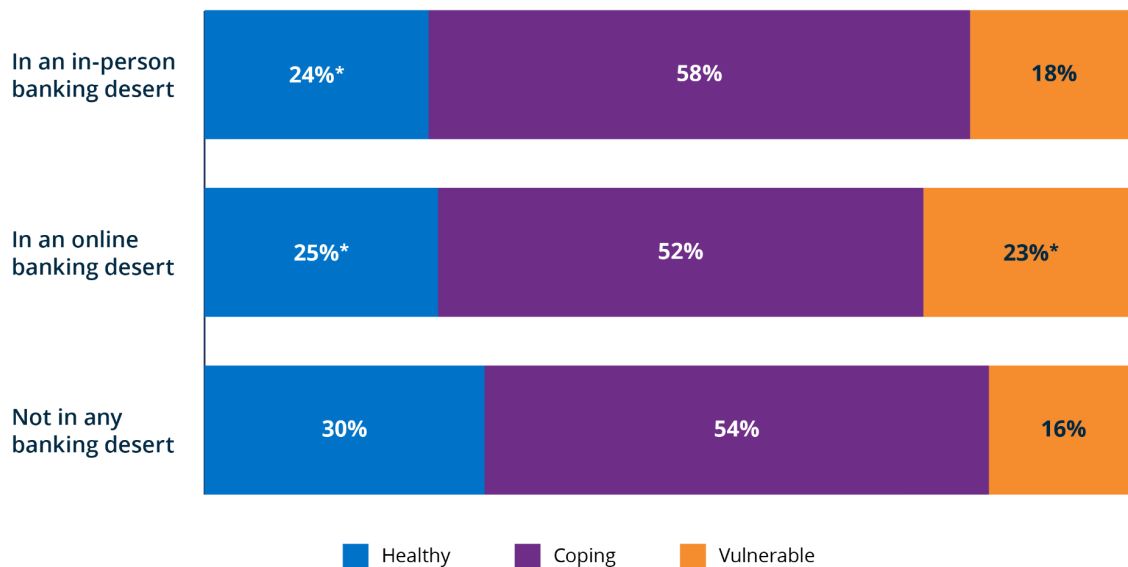
Findings are reported in comparison to those living in communities with available banking services. Please see [Appendix Table A1](#) for exact percentages.

People in In-Person and Online Banking Deserts Have Lower Financial Health

Using the Financial Health Network’s FinHealth Score®, we find that **financial health was compromised in communities with fewer banking options available and was especially challenged in online banking deserts** when taking into account household income and age.^{19, 20}

Figure 2. People living in an in-person or online banking desert were less frequently Financially Healthy than people not living in a banking desert.

Percentage of people in banking deserts, by financial health tier.



Note: In an in-person banking desert N = 234, in an online banking desert N = 485, not in any banking desert N = 7,171. All findings are statistically significant when we control for household income and age. We omitted 309 respondents whose banking availability is unknown and 65 respondents residing in both online and in-person banking deserts. * Statistically significant difference relative to people “not in any banking desert” (p < 0.05).

In particular, **consumers living in physical banking deserts and residents of online banking deserts were less frequently Financially Healthy**, meaning that they were less frequently spending, saving, borrowing, and planning in ways that allow them to be financially resilient and

¹⁹ Please see the [FinHealth Score methodology webpage](#) for more information on how the score was designed. In 2023, 0.76% of the sample had missing values for their FinHealth Score because they had not answered one or more of the eight financial health indicator questions.

²⁰ We used a linear probability model with financial health as a dependent variable, banking deserts as a categorical independent variable, and household income and age as control variables.

thrive, than residents of communities with available online and in-person banking options (Figure 2). In addition, compared with those living in areas with available in-person and online banking options, we found **a greater share of Financially Vulnerable consumers, or those struggling with almost all aspects of their financial lives, living in online banking deserts** (16% versus 23%).

The share of Financially Healthy consumers living in physical banking deserts (24%) did not differ from the share of Financially Healthy residents of online banking deserts (25%) when household income and age were taken into account. However, **residents of online banking deserts were more often Financially Vulnerable (23%) than residents of in-person banking deserts (18%)**. As a result, consumers in online banking deserts are experiencing the greatest challenges to financial health, suggesting a potential opportunity for in-person bank branches to better support the residents of their communities, especially when broadband availability is limited.

Banking Deserts and Trust in Financial Institutions

When present in a community, financial institutions can build familiarity among customers and support financial health by encouraging financial inclusion and the use of banking tools and services. In contrast, living in communities where banking services, especially in-person banking options, are less available may make it harder for community members to trust financial institutions.

Taking into account household income and age, Pulse data show that **consumers living in in-person banking deserts less frequently reported trusting financial institutions**, such as banks or credit unions, than residents of communities with greater access to financial services (78% versus 84%).²¹ However, those living in online banking deserts reported similar levels of trust as residents of communities with more available financial services (81% versus 84%). Although these findings are not causal, they provide evidence for the importance of in-person banking options to develop trust among consumers.

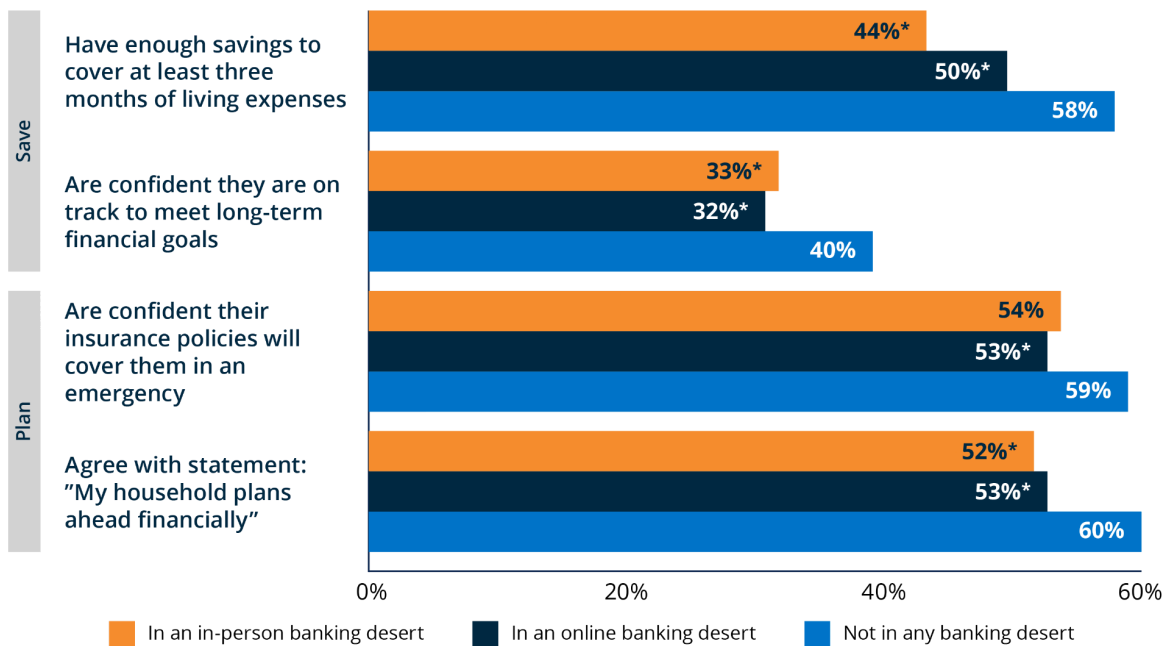
²¹ We define trusting financial institutions as those who report “completely,” “mostly,” or “somewhat” trusting financial institutions or credit unions.

Residents of Both In-Person and Online Banking Deserts Struggle To Save and Plan

Financial health is a composite measure of how consumers spend, save, borrow, and plan. Lower overall financial health indicates challenges in one, or sometimes more, of these aspects of consumers’ financial lives. Pulse data show that **those living in either in-person or online banking deserts more frequently experienced challenges around saving and planning** (Figure 3), even when accounting for household income and age.

Figure 3. People who live in an in-person or online banking desert more frequently struggle to save and plan financially.

Percentage of people who positively responded to each saving and planning indicator, by community type.



Note: In an in-person banking desert N = 234, in an online banking desert N = 485, not in any banking desert N = 7,171. All findings are statistically significant when we control for household income and age. * Statistically significant difference relative to people “not in any banking desert” (p < 0.05).

Saving

Residents of in-person and online banking deserts were both at a greater risk of facing short-term savings challenges. **Consumers in either online or in-person banking deserts less frequently reported having enough savings to cover at least three months of living expenses** (50% and 44%, respectively), compared with those living in communities with more available banking services (58%).

Similarly, consumers living in either in-person or online banking deserts had concerns about meeting long-term financial goals. Pulse data show that **those in online banking deserts and in-person banking deserts less frequently reported they were confident that they were on track to meet their long-term financial goals** (32% and 33%, respectively) than those living in communities with bank branches and broadband available (40%).

Residents of in-person banking deserts seemed especially at risk of experiencing short-term savings challenges. Compared with residents of online banking deserts, consumers living in in-person banking deserts **less frequently reported having three or more months of savings** (50% versus 44%).

Promoting Savings Behavior in Banking Deserts

Long-term savings may be harder to accrue for residents of in-person or online banking deserts because it can be more challenging to deposit savings regularly or to learn about savings vehicles that may help them reach their long-term goals.

Even when taking into account household income and age, residents of in-person and online banking deserts more often reported that they don't set aside money for long-term expenses like retirement or education (46% and 45%, respectively) compared with those living in communities with more available banking services (34%). Consumers living in banking and broadband deserts may benefit from financial products and services that [promote regularly saving](#).

Planning

Data from the 2023 Pulse survey showed that **consumers living in in-person or online banking deserts less frequently agreed with the statement that their household plans ahead financially** (52% and 53%, respectively) than those with both in-person and online banking services

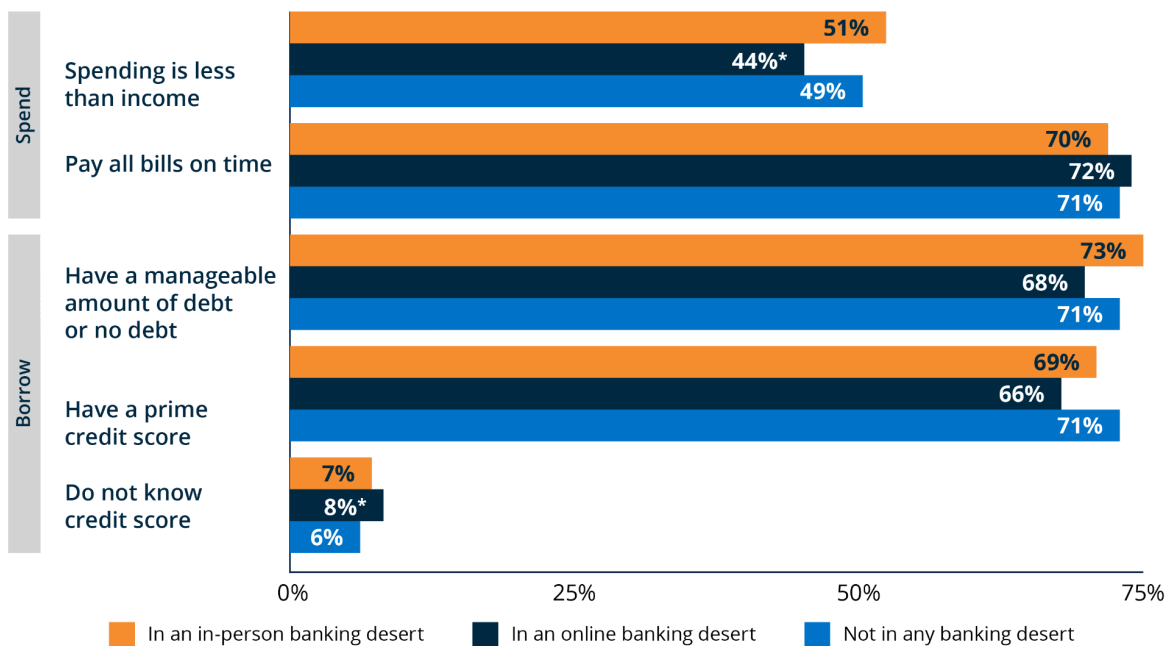
available in their communities (60%).²² Residents of in-person banking deserts did not differ substantially from consumers living in online banking deserts in terms of their agreement that they plan ahead financially.

Residents of Online Banking Deserts Also Struggle With Spending and Borrowing

Pulse data show that **residents of online banking deserts faced additional financial health barriers related to spending and borrowing** when accounting for household income and age (Figure 4).

Figure 4. People living in an online banking desert more frequently face spending and borrowing challenges.

Percentage of people who positively responded to each spending and borrowing indicator, by community type.



²² The Financial Health Network also surveys consumers on their confidence in insurance policies as an indicator of financial planning. Residents of online banking deserts were unique in that they were less frequently confident that their insurance policies would cover them in an emergency relative to those with banking services available to them (53% versus 59%). However, financial institutions may be limited in how much they can improve consumer confidence in insurance products.

Note: In an in-person banking desert N = 234, in an online banking desert N = 485, not in any banking desert N = 7,171. All findings are statistically significant when we control for household income and age. * Statistically significant difference relative to people “not in any banking desert” (p < 0.05).

Spending

Residents of online deserts less frequently reported spending less than their income relative to residents of communities with in-person and online banking available (44% versus 49%). We found a similar pattern when comparing residents of online banking deserts with in-person banking deserts. Specifically, **relative to in-person banking deserts, residents of online banking deserts less frequently reported spending less than their income** (51% versus 44%). These data illustrate that spending challenges are particularly pronounced for consumers living in online banking deserts.

In contrast, we found no significant differences in how residents of online banking deserts were faring in terms of whether they paid all of their bills on time when compared with other communities.

Borrowing

Consumers residing in online banking deserts were less knowledgeable about their credit standing compared with residents of communities with in-person and online banking services available. When asked to share their credit score, **residents of online banking deserts more frequently reported not knowing their credit score** than consumers residing in areas with greater availability of banking services (8% versus 6%). We did not observe any differences when comparing residents of in-person banking deserts and online banking deserts.

In contrast, consumers across all communities responded similarly about the manageability of their debt.

Checking Credit Scores

Residents of online banking deserts may be less certain about their credit scores because it is more challenging to monitor them when certain internet-based banking services, such as online dashboards, are less available.

Indeed, Pulse data show that residents of online banking deserts less frequently reported checking their credit score in the last year than those living in communities with more available banking services (57% versus 64%). Assuming that consumers have credit records to monitor, in-person bank branches could develop strategies to [promote credit monitoring among their customers](#).

Recommendations for Financial Institutions, Community Organizations, Researchers, and Policymakers

Twenty-five million consumers live in communities with limited banking services, either because of a lack of in-person bank branches or insufficient broadband options. Current definitions of banking deserts that solely focus on the availability of in-person bank branches are undercounting the number of consumers who may be struggling to access and use financial services. **Expanding the existing definition of banking deserts to incorporate communities living in areas with limited broadband services** will provide a better understanding of how many consumers live in areas with limited banking services, potential actions to take, and where to target efforts.

Consumers living in online and in-person banking deserts disproportionately experience financial health challenges, even after accounting for household income and age. This underscores the potential influence of financial institutions in improving and safeguarding financial health. Yet it is also critical for stakeholders to **recognize that online banking may not be a silver bullet for addressing the financial health challenges of residents living in banking deserts**. For one, almost a quarter of residents of communities without in-person bank branches faced limited broadband availability as well. Additionally, another 15 million consumers live in communities with in-person bank branches but without online banking services. Online solutions may not be appropriate for these communities.

Banking deserts and the financial health challenges they pose for consumers represent **an opportunity for cross-sector collaboration**, which may be beneficial for:

- **Reducing the number of consumers living in online banking deserts.** Online banks and fintechs could partner with community institutions, such as libraries or local governments, to help fund broadband initiatives. These could be similar to the work being done by [Rocket Community Fund](#) or the partnerships built for the rollout of programs like [Google Fiber](#).
- **Reducing the number of consumers living in physical banking deserts.** Financial institutions may consider partnering with retail establishments or community organizations to share retail space; investing in mobile bank branches, like those utilized by [PNC](#) and [KeyBank](#); and exploring federal banking options, such as post offices providing financial services, to mitigate the financial health risks associated with in-person banking deserts.
- **Developing a deeper understanding of the financial needs of these communities, especially residents of in-person banking deserts who report less trust in financial**

institutions. Fintechs and financial institutions could benefit from the local expertise and deep roots of community organizations to ensure that banking services and products reflect local needs.²³ Our analysis shows that residents of in-person deserts could benefit from targeted support around saving and planning. Cross-sector collaboration with community stakeholders could further specify how to support residents' saving and planning.

- **Supplementing the offerings of local bank branches with mobile app platforms that can operate in online banking deserts.** Financial health was at the greatest risk among residents of online banking deserts. In-person banks serving customers in online deserts could partner with fintechs to design the front-end technology for mobile apps, keeping in mind the unique user experience (UX) of those living without high-speed broadband. Examples of these types of collaborations include [Jack Henry's partnership with Native American Bank](#), [Wellthi's partnership with Discover](#), and [SavvyMoney's](#) work with multiple financial institutions.

Overall, this study provides a first look at how identifying online banking deserts can augment our understanding of banking deserts and the financial challenges experienced by consumers living in these communities. Future work can build on this research by incorporating additional data that will further refine our estimates of the number of consumers living in banking deserts and clarify the relationship between banking deserts and financial health. By highlighting the financial health challenges experienced by communities where banking services are less available, this study underscores how critical the financial sector is to supporting consumers' financial health.

²³ Jason Richardson & Catherine Petrusz, "[NCRC And WSECU: Pioneering Collaborative Efforts For Community-Centric Financial Branches](#)," National Community Reinvestment Coalition, February 2024.

Appendix

About Our Methodology

Data

The data used in this analysis comes from the 2023 Financial Health Pulse survey, the FDIC-insured active bank branch locations (active as of November 2023), and the FCC Form 477 broadband deployment data to identify respondents residing in either in-person or online banking deserts. The Financial Health Pulse survey was fielded between April 27, 2023 and June 11, 2023, to panelists of the University of Southern California's [Understanding America Study](#) (UAS). The overall sample is weighted using U.S. Census benchmarks to be representative of the noninstitutionalized civilian adult population of the United States along gender, race/ethnicity, age, education, and Census region.

Sample

Among 8,283 respondents in the 2023 Pulse survey, 19 respondents were dropped due to missing observations on their financial health. The final sample of this analysis was composed of 8,264 respondents.

Defining Communities by Availability of Financial Services

In-person banking deserts are communities that have broadband, but no in-person bank branches located in the surrounding area. In urban and suburban communities, in-person banking deserts are communities without an open, FDIC-insured bank branch in that same zip code or in any zip code within a 5-mile radius.²⁴ In rural communities, in-person banking deserts are communities without an FDIC-insured bank branch in that same zip code or in any surrounding zip codes within a 10-mile radius.

Online banking deserts are communities that have in-person bank branches, but do not have available broadband. To identify online banking deserts, we flagged Census blocks with no internet providers offering broadband service at a minimum advertised speed of 100/20 Mbps. In these communities, individuals must either use mobile data or slower than recommended internet speeds to access online banking services.

²⁴ We identify urban (including suburban) and rural areas the Pulse survey respondents reside in using the list of [2020 Census Blocks in Urban Areas](#). This follows the approach taken in prior research. See Alaina Barca & Harry Hou, "U.S. Bank Branch Closures and Banking Deserts," Federal Reserve Bank of Philadelphia, February 2024; Ryan M. Goodstein & Sherrie L.W. Rhine, "The Effects of Bank and Nonbank Provider Locations on Household Use of Financial Transaction Services," Federal Deposit Insurance Corporation, FDIC Division of Depositor & Consumer Protection Working Paper No. 2016-01, February 2016; Drew Dahl & Michelle Franke, "Banking Deserts' Become a Concern as Branches Dry Up," Federal Reserve Bank of St. Louis, Regional Economist, 2017.

Communities that we identified as both in-person and online banking deserts are those where residents had neither in-person bank branches nor broadband available to them. They did not have bank branches located in their zip code or neighboring zip codes and did not have broadband available at speeds of at least 100/20 Mbps in their Census blocks.

Communities with available banking services are those with both in-person bank branches and broadband available. They live in the same zip code as a bank branch or within 5 miles of a zip code with a bank branch in urban areas or within 10 miles in rural areas, and live in a Census block with broadband available at internet speeds of at least 100/20 Mbps.

There is also a group of individuals for whom their bank availability is unknown. Communities can fall into this “unknown” group in two different ways. First, some consumers (N = 242) in our Pulse survey do not have detailed geographic information other than the state where they reside. Second, a small number of Census blocks are not included in the FCC data, and we therefore cannot identify whether or not the individuals (N = 67) residing in those Census blocks live in broadband deserts.

Analysis

All findings in this study are descriptive statistics. Percentages are reported from crosstabs generated without controls. We only report on findings that remained statistically significant in linear probability models that controlled for household income and age. Household income is a categorical variable with four categories: Less than \$30,000; \$30,000-\$59,999; \$60,000-\$99,999; and \$100,000 or more. Age is a continuous variable and respondents range in ages from 18 to 99 years old. We also ran models where we included a quadratic for age and the findings presented remained consistent.

Supplemental Data Tables

Table A1. Consumer characteristics by community type.

	In-person banking desert	Online banking desert	Not in any banking desert
Regions			
Midwest	18%	30%*	20%
Northeast	9%*	8%*	19%
South	42%	48%*	37%
West	31%*	14%*	24%
Urbanicity			
Rural	28%*	86%*	20%
Urban	72%*	14%*	80%
Race and ethnicity			
Asian	NA	NA	NA
Black	8%*	8%*	12%
Latinx	11%	7%*	12%
White	70%*	73%*	61%
Multiracial	NA	NA	NA
Other race and ethnicity	NA	NA	NA
Household income			
Less than \$30,000	29%	30%*	25%
\$30,000-\$59,999	26%	25%	23%
\$60,000-\$99,999	24%	21%	23%

\$100,000 or more	21%*	23%*	28%
Age			
18-35 years old	20%*	17%*	27%
36-49 years old	26%	27%	27%
50-64 years old	26%	28%	24%
65 and older	27%	28%*	22%
Disability status			
With a disability	31%*	30%*	22%
Without a disability	69%*	70%*	78%

Note: In an in-person banking desert N = 234, in an online banking desert N = 485, not in any banking desert N = 7,171. NA represents findings with cell sizes that are too small to report out with confidence. * Statistically significant difference relative to people “not in any banking desert” (p < 0.05).