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# U.S. Bank Branch Closures and Banking Deserts

COMMUNITY DEVELOPMENT RESEARCH & OUTREACH

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# Introduction

It is commonly known that the Great Recession was a turning point for bank branches across the United States, launching a trend of bank branch closures across the country (Kreiss, 2021; Barca and Ding, 2023; Edlebi et al., 2022; CFPB, 2023; Ding and Reid, 2019). What is less well-known — but that is gaining more attention — is that this existing trend was exacerbated at the onset of the COVID-19 pandemic. Since 2020, the pace of bank branch closures across the country has doubled (Edlebi et al., 2022).

The accelerated decline of bank branches calls into question the impact of such closures. Whether a decrease in physical bank branches in a geography leads to a decrease in access to banking services is difficult to determine, especially with the rise in access to and usage of online banking services. Nonetheless, lowered access to physical bank branches may impede banking service access for some populations, particularly those facing other barriers to banking services or those who rely on in-person banking for accessibility reasons.

In this report, we paint a landscape of changes in bank branches and banking deserts — or neighborhoods with no bank branches nearby — across the country's geographies and communities since the onset of the COVID-19 pandemic, basing our definitions on those introduced in the Interagency Notice of Proposed Rulemaking to Implement the CRA (Community Reinvestment Act) (BOG, FDIC, and OCC, 2022).<sup>1</sup> We use data from S&P Global Market Intelligence SNL U.S. Bank Branch Data ("S&P SNL branch data"), a comprehensive data set of bank branches. We focus on brick-and-mortar, full-service, retail branches, including those of commercial banks, savings and loan associations, and credit unions (bank branches for simplification hereafter). We compare prepandemic bank branch conditions in December 2019 with conditions since

the onset of the COVID-19 pandemic, specifically bank branches in mid-2023.<sup>2</sup>

We show that since the onset of the COVID-19 pandemic, the total number of U.S. bank branches has declined by 5.6 percent, the number of banking deserts has increased by 217, and the population living in banking deserts has increased by over 760,000 people. More specifically,

- the bulk of branch losses can be attributed to large and very large banks, and most branch losses and desert growth happened in higher-income, suburban, and predominantly White communities;
- areas with high concentrations of lower-income, Asian, Black, and disabled residents, as well as racially diverse areas, lost branches at a disproportionate rate; and
- banking desert increases in majority-Black areas outpaced the national average.

We review case studies of strategies being implemented in communities across the country intended to address the changing retail banking landscape. Further study is needed to investigate the true impacts of branch closures, banking deserts, and the various response strategies being implemented across different types of communities.

## Background and Motivation

The accelerated pace of bank branch closures has often been justified with the rise in online banking and pandemic-induced declines in demand for in-person banking. Consumer data support this; more consumers are switching to primarily or entirely mobile and online banking (FDIC, 2021). Declines in branch foot traffic and demand have made closing branches a common way for banks to cut costs while retaining many of their customers through online channels (Dixit, 2021).

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<sup>1</sup> We define banking deserts as census tracts without any bank branches within a fixed-radius distance (two miles in urban areas, five miles in suburban areas, and 10 miles in rural areas) from the population-based centroid of the tract or within the tract itself. For more information about the definition, see the appendix.

<sup>2</sup> Throughout the report, group comparisons that are made in the text are at least statistically significant at the 10 percent level. We test proportional changes and sample proportions using two-proportion z-tests and differences in means using two-sample t-tests. Also note that findings are not directly comparable across this report and the Third District report that preceded it because of different data cleaning procedures and banking desert definitions (Barca and Ding, 2023).

While the popularity of online banking has skyrocketed, physical banking still plays an important role in some communities. Many lower-income, rural, older, and disabled consumers still prefer to bank with a teller (FDIC, 2021). And while the number of households with broadband access has increased in recent years, home broadband adoption remains out of reach for many Americans, which may result in lower or no access to digital banking services (Pew Research Center, 2021). Digital connectivity is not equal across communities, either. Lower-income, rural, and older populations, as well as people of color, are less likely to have broadband at home (Pew Research Center, 2021).

Physical branches are also more conducive to personal relationships with bankers, which are often important for loan and grant applications, financial guidance, fraud prevention, and building trust with a financial institution (Barton, 2016; Gunther and Teaster, 2019). An overwhelming share of small businesses still rely on banks for financing applications, and many cite their relationship with their lender as the reason they continue to work with them (Federal Reserve Banks, 2023). Lower-income, Black, and Hispanic adults are also more likely to rely on cash, which requires physical banking resources (Faverio, 2022).

Consumers with certain disabilities may rely more on in-person banking, as well. Twenty-seven percent of Americans have a disability that may impair them from accessing online banking services, and disabled consumers are more likely to bank in person compared with the average American (American Bankers Association, 2022; FDIC, 2021). Further, the Census Bureau projects a rise in the number of older Americans, so the number of consumers with age-related disabilities that could hinder their ability to navigate online banking is likely to grow (Vespa, 2018).

Lower-income communities may shoulder more of the negative impact of bank branch closures because of other barriers to banking. Research has suggested bank branches in lower-income communities are correlated with more mortgage originations and lower interest rates, with these effects strengthening with branch proximity to the

neighborhood (Ergungor, 2010). Lower access to traditional banking services can drive consumers to alternative financial services. Bank branch closings may increase the demand for fringe banking services such as payday lenders and check-cashing services, which raise the overall cost of consuming and inhibit opportunities for savings (Dunham, 2019).

Since reliable access to banking can be an engine for economic mobility and wealth accumulation, we pay particular attention to the groups most at risk of potential negative impacts from branch closures. Thus, we disaggregate data across rural, suburban, and urban communities; income groups; majority race; digital connectivity; as well as concentration of older and disabled residents. We also use 2020 demographic information for these groups, offering a more current description of conditions than does other recent literature, which often follows a longer time trend and thus uses older demographic information.<sup>3</sup>

## Trends in Branches

### Bank Branches Across the United States

From the end of 2019 to mid-2023,<sup>4</sup> total U.S. bank branches declined by 5.6 percent, falling from 96,104 to 90,691 branches. These losses were not consistent across bank types, as shown in Table 1. Large banks (those with assets<sup>5</sup> between \$10 billion and \$50 billion) and very large banks (those with assets of \$50 billion or more) lost a greater portion of their 2019 branches than did smaller banks, decreasing by 11.0 and 12.6 percent, respectively. Credit unions lost 0.1 percent of their branches, while community banks (those with less than \$10 billion in assets) increased their branches by 1.1 percent during this time.

In line with these findings, the banks with the largest decline in total were all very large banks. Since 2019, the banks with the largest net branch losses were Truist, Wells Fargo, PNC, Bank of America, and U.S. Bancorp. Together, these banks accounted for 2,919 branch losses, more than 50 percent of the net loss of 5,413 branches during this

<sup>3</sup> We describe this further in the appendix.

<sup>4</sup> We use "mid-2023" as shorthand for as of June 30, 2023.

<sup>5</sup> Bank assets are from the S&P SNL branch data, derived from the Summary of Deposits, as of June 2023.

time. Across all banks and credit unions in our sample, these five banks made up 27 percent of all 2023 deposits. Notably, many large and very large banks engaged in mergers and acquisitions throughout this period. While we do not directly show that these consolidations resulted in branch closures, there is evidence that recent mergers involving large banks resulted in an overall reduction of bank branches (Calzada et al., 2022).

An examination of branch losses by state paints a more comprehensive picture, as shown in Figure 1. Since 2019, 42 states and the District of Columbia had a net loss in branches. States in the Mid-Atlantic, South Atlantic, Midwest, and Pacific divisions lost the most branches relative to their active branches in 2019. Specifically, the states that lost the most branches relative to their 2019 numbers were Virginia (-12.5 percent), Maryland (-12.1 percent), New Jersey (-11.7 percent), Oregon (-9.9 percent), and Pennsylvania (-9.8 percent).

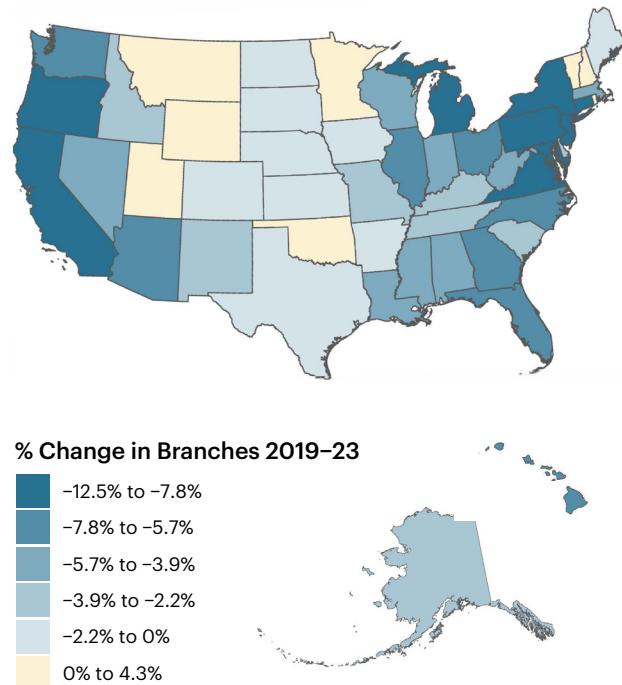
The states that experienced the largest net losses during this time were California (-640), New York (-457), Pennsylvania (-430), Florida (-424), and New Jersey (-342). Although it does not directly explain why these states experienced such large losses, it is worth noting that for all states highlighted except Pennsylvania, a significantly larger-than-average portion of their active 2019 branches were owned by large or very large banks.<sup>6</sup>

While most states lost branches since the onset of the pandemic, the total branch count rose in eight states: Utah, Montana, Rhode Island, Minnesota, Vermont, Wyoming, Oklahoma, and New Hampshire. Those states gained between one and 26 branches, an increase between 0.2 percent and 4.3 percent.

## Bank Branches Across Communities

To further explore changes in bank branches across the country, we investigate branch losses across different

**FIGURE 1** Bank Branch Changes Since the Onset of the COVID-19 Pandemic



Sources: Authors' calculations based on S&P SNL branch data and U.S. Census TIGER/Line Shapefiles.

Notes: Only brick-and-mortar, non-in-store, full-service, and retail branches are included for all types of banks and credit unions. Percent change is from December 2019 to mid-2023.

types of communities. We categorize census tracts by their metropolitan (metro) status of rural, suburban, or urban; median income; majority race; digital connectivity; as well as concentration of older and disabled residents.<sup>7</sup>

Table 1 demonstrates that rural, suburban, and urban areas all experienced a decline in their total active branches between 2019 and mid-2023.<sup>8</sup> During this time, urban

<sup>6</sup> Differing from the national trend, the banks with the most net branch loss in Pennsylvania were PNC, Wells Fargo, Truist, Northwest Bank, and Santander, together making up 61.6 percent of the branch losses in the state.

<sup>7</sup> Census tracts are relatively homogeneous areas containing about 4,000 people.

<sup>8</sup> All tracts were classified into three areas: "Urban areas" refer to census tracts whose 2016–2020 American Community Survey (ACS) population lies primarily within both a metropolitan statistical area (MSA) and a principal city of its MSA, "suburban areas" refer to census tracts whose population lies primarily within an MSA but not within the principal cities of its MSA, and "rural areas" refer to census tracts whose population does not lie primarily within an MSA.

TABLE 1

## Bank Branch Changes Since the Onset of the COVID-19 Pandemic

	2019	2023	2019–2023 Percent Change
Total	96,104	90,691	-5.6%
By bank type			
Community banks (<\$10B)	30,189	30,512	1.1%
Large banks (\$10B–\$50B)	11,064	9,851	-11.0%
Very large banks (>=\$50B)	35,679	31,171	-12.6%
Credit unions	19,171	19,157	-0.1%
By tract metro status			
Rural	19,490	18,678	-4.2%
Suburban	44,807	42,136	-6.0%
Urban	31,807	29,877	-6.1%
By tract median family income			
LMI (<80% area median)	24,421	22,981	-5.9%
MUI	69,995	66,195	-5.4%
By tract majority race/ethnicity			
American Indian/Alaska Native	59	62	5.1%
Asian	1,026	948	-7.6%
Black	4,145	3,871	-6.6%
Hispanic	5,376	5,154	-4.1%
White	73,589	69,570	-5.5%
Diverse (no predominant race)	11,909	11,086	-6.9%
By other categories			
Low device access	25,365	23,920	-5.7%
Low broadband access	23,113	21,821	-5.6%
High share of older residents	27,938	26,325	-5.8%
High share of disabled residents	24,889	23,422	-5.9%

Sources: Authors' calculations based on S&P SNL branch data, 2022 FFIEC Census Flat File, and 2016–2020 American Community Survey data.

Notes: Categorical sums may not match totals if category data are missing, e.g., a tract is not classified as LMI or MUI. Only brick-and-mortar, non-in-store, full-service, and retail branches are included for all types of banks and credit unions. Branch counts were as of December 2019 and mid-2023. All race categories are non-Hispanic, making the Hispanic and other race categories mutually exclusive. Diverse tracts are non-Hispanic tracts in which a single race does not make up more than 50 percent of the tract population. "Other categories" are not mutually exclusive.

and suburban areas lost higher proportions of their 2019 branches than their rural counterparts, while suburban areas made up the bulk of net losses (49.3 percent).

Likewise, both low- and moderate-income (LMI) and middle- and upper-income (MUI) communities experienced a net loss in branches.<sup>9</sup> While the bulk of losses occurred in MUI communities (70.2 percent), the percent of branches lost

<sup>9</sup> Tracts are low- and moderate-income if their 2016–2020 American Community Survey (ACS) median family income is below 80 percent of the area median family income, and middle- and upper-income if their median family income is greater than or equal to 80 percent.

in LMI communities was significantly greater compared with that in MUI communities. Across LMI areas, total bank branches fell 5.9 percent, while MUI areas lost 5.4 percent.

By tract majority race, all racial categories except majority-American Indian and Alaska Native communities experienced a decline in bank branches since 2019.<sup>10</sup> Total branches fell the most proportional to 2019 branches for majority-Asian and majority-Black tracts (7.6 percent and 6.6 percent, respectively), in addition to racially diverse tracts (6.9 percent). Reflecting the greater number of majority-White census tracts, the bulk of losses occurred in majority-White communities, with a loss of 4,019 branches.

Finally, we are particularly interested in trends for populations that may encounter barriers to online banking services or prefer to bank in person for accessibility reasons, since these populations might have a higher demand for physical banking services.<sup>11</sup> Thus, we look at tracts with low device access,<sup>12</sup> tracts with low broadband access,<sup>13</sup> tracts with a high share of older residents,<sup>14</sup> and tracts with a high share of disabled residents.<sup>15</sup> Across all four of these communities, we find that only tracts with a high share of disabled residents lost branches at a significantly faster rate than the national average, losing 5.9 percent of their branches since 2019.

## Trends in Banking Deserts

### Defining Banking Deserts

To discuss the relationship between bank branch declines and access to physical banking services, we need to use a measure of bank branch access. Although there is no standard definition, banking deserts are a common metric used to measure branch access (Kreiss, 2021; Morgan et. al, 2016; Ergunor, 2010; Edlebi et. al, 2022; Dahl and Franke, 2017).

We define a banking desert based on the methodology for “areas with very low branch access” introduced in the CRA NPR, such that a banking desert is a census tract that has no bank branch within a defined radius from the population center of the tract (two miles in urban areas, five miles in suburban areas, and 10 miles in rural areas), or within the tract itself (BOG, FDIC, and OCC, 2022). The different distance thresholds account for variation in spatial density across these different types of geographies. We also use the term “potential banking desert” to identify areas at risk of becoming banking deserts. Potential deserts are census tracts with only one bank branch within the fixed distance of the census tract’s population center as defined for banking deserts, or within the tract itself. This definition is based on the CRA NPR’s methodology for “areas with low branch access” (BOG, FDIC, and OCC, 2022).<sup>16</sup>

<sup>10</sup> A tract has a majority race if more than half of its 2016–2020 American Community Survey (ACS) population shares the same race or ethnicity. Non-Hispanic tracts in which a single race does not make up more than half of the population are referred to as either “diverse,” “racially diverse,” or having “no predominant race.”

<sup>11</sup> All four subsequently defined categories each make up 25 percent of tracts and are based on the highest quartile of the respective group. For more information, see the appendix.

<sup>12</sup> More than 12.3 percent of 2020 households in tracts with *low device access* do not have access to a computing device — a desktop, laptop, smartphone, tablet, or other computer.

<sup>13</sup> More than 21.5 percent of 2020 households in tracts with *low broadband access* do not have access to broadband internet.

<sup>14</sup> More than 20.8 percent of 2020 residents in tracts with *a high share of older residents* are 65 years old or older.

<sup>15</sup> More than 16.8 percent of residents in tracts with *a high share of disabled residents* have a disability.

<sup>16</sup> Although we base our definitions of banking deserts and potential banking deserts off the “low” and “very low access” approaches introduced in the CRA NPR, there are some differences between our methodologies, which are described in the appendix. For providing guidance on bank evaluations, the CRA final rule of 2023 does not include these proposed definitions, favoring instead an approach that incorporates local context, more nuanced criteria, and relative subjectivity of bank branch and community development activities (BOG, FDIC, and OCC, 2023). Another approach introduced in the CRA NPR — also not included in the final rule — suggested measuring bank branch access through “local areas,” defined based on delineations of metropolitan and nonmetropolitan areas, and distance thresholds for determining branch access would vary across area population density, land use, and time (BOG, FDIC, and OCC, 2022).

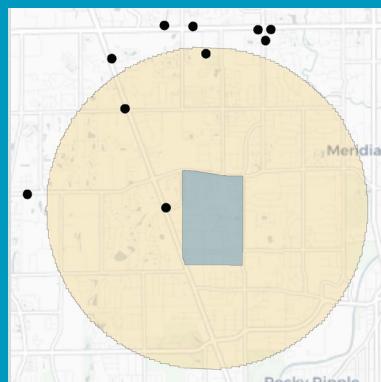
# A Closer Look:

## Example of a Potential Banking Desert and Banking Desert Formation

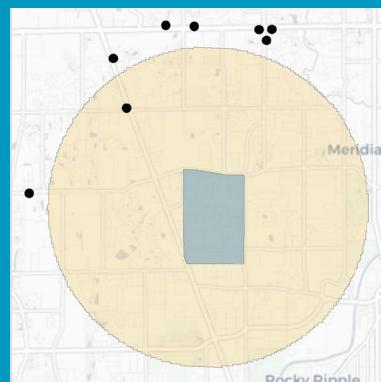
Census tract 3209.03 is an urban tract in north Indianapolis, IN, that became a banking desert in 2021. The tract's roughly 6,200 residents are predominantly Black, with a median household income of \$33,000, making it an LMI tract. Although it is not a low broadband access tract, it does have low device access; 15 percent of the tract's households do not have a computer, tablet, smartphone, or other computing device.

Since at least 2001, the tract had one credit union branch, Indiana Members Credit Union, and two large bank branches, a JPMorgan Chase and a PNC Bank, within the two-mile radius from its population center. Both the credit union and the Chase branch closed in 2020, making it a potential desert, with just one bank branch, PNC, within its radius. In 2021, the PNC branch closed, making the census tract a banking desert. As of mid-2023, the nearest branch from the tract's population center is a Fifth Third Bank branch that is 2.2 miles away.

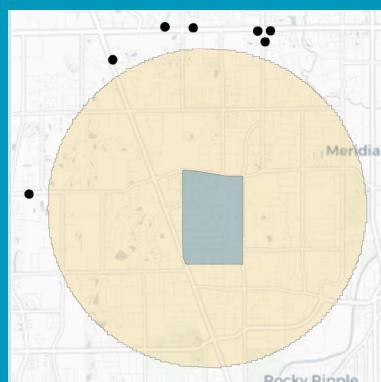
### 2019: Three branches in radius



### 2020: Potential banking desert



### 2021: Banking desert



Census tract 3209.03 in Indianapolis, Indiana (blue), with its two-mile radius (gold), and branches nearby (black dots).

Sources: S&P SNL branch data and U.S. Census TIGER/Line Shapefiles.

## Banking Deserts Across the United States

Table 2 shows that between 2019 and 2023, the number of banking deserts in the United States increased by 217, or 6.4 percent, from 3,401 to 3,618. The number of people living in banking deserts increased from 11.5 million (3.5 percent of the population) in 2019 to 12.3 million (3.8 percent of the population) in 2023.<sup>17</sup>

Changes in banking deserts since the onset of the pandemic varied across states, as shown in Figure 2. Many states in the Mid-Atlantic and New England saw the largest changes in banking deserts between 2019 and 2023. The states with the largest increases in banking deserts relative to 2019 were Delaware (57.1 percent), Pennsylvania (44.2 percent), New Jersey (42.9 percent), and Vermont (33.3 percent). While it is difficult to say why these states experienced the largest percentage increases in their number of deserts, both Pennsylvania and New Jersey saw some of the largest losses of bank branches among states during this time. Additionally, Delaware, New Jersey, and Pennsylvania all have a higher percentage of suburban tracts than the national average. As previously described, about half of branch losses occurred in suburban tracts, and it will be shown later that most desert growth occurred in suburban tracts as well.

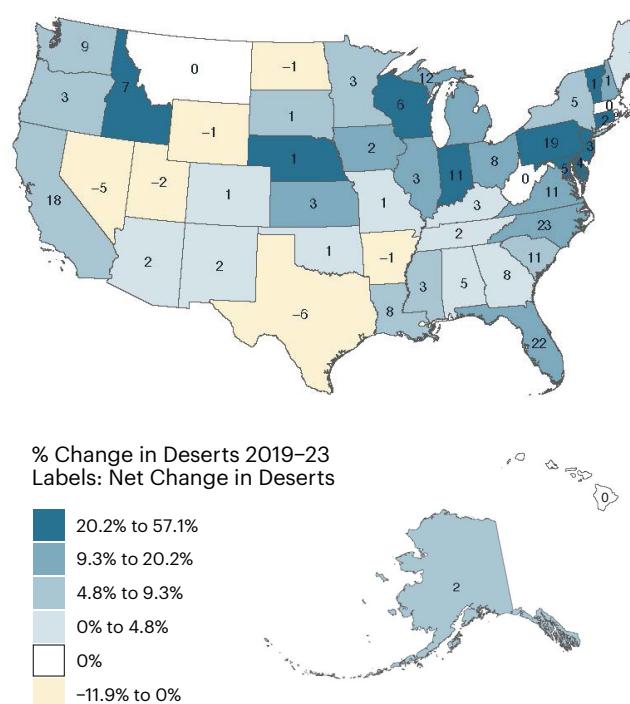
<sup>17</sup> The CRA NPR estimated 3.1 percent of the population were living in banking deserts in mid-2021 (BOG, FDIC, and OCC, 2022). Applying our methodology to their demographic and geographic boundary vintages (2015–2019 ACS), we estimate the percent of the population living in banking deserts in mid-2021 to be 4.1 percent. There are a few key differences in our methodology that result in our estimate being higher, namely that we use a stricter definition of “active branch” and our data are more recent and have been retroactively updated to capture closures that occurred in 2020 and 2021.

# A Closer Look: States with Banking Desert Improvements Since 2019

Contrarily, six states experienced decreases in banking deserts during this time — Texas, Nevada, Utah, Wyoming, North Dakota, and Arkansas. An additional five states did not gain or lose any banking deserts — Hawaii, Massachusetts, Montana, Rhode Island, and West Virginia, as well as the District of Columbia. All remaining states experienced a net increase in banking deserts since the onset of the COVID-19 pandemic.

**FIGURE 2** Banking Desert Changes Since the Onset of the COVID-19 Pandemic

State labels indicate the net change in the number of deserts



<sup>18</sup> Authors' calculations using 2015–2019 and 2017–2021 American Community Survey (ACS) data.

While most states and the nation overall gained banking deserts since 2019, several states — Nevada, Utah, Wyoming, North Dakota, Arkansas, and Texas — experienced the opposite trend of a decrease in banking deserts since the onset of the COVID-19 pandemic.

These states had significantly lower concentrations of large and very large banks in 2019 than the national average, implying they may have had fewer of those types of branches to lose; 44.1 percent of branches in these states were owned by large and very large banks, compared with 48.6 percent of branches in the nation. Additionally, compared with the national average, more 2019 deserts in these states were “partially cured” (became a potential desert) by mid-2023. The portion of the states’ deserts that were partially cured was 7.7 percent, compared with 3.2 percent of the nation’s.

Socioeconomically, the states that saw banking desert improvements also saw significantly faster increases in population during some of this period compared with the nation overall. From 2019 to 2021, the population in states with desert declines increased by 2.2 percent, compared with a national population increase of 1.5 percent. Changes in income were not significantly different than the country.<sup>18</sup>

Not all states in this list experienced an increase in bank branches during this time. In fact, Utah and Wyoming were the only states with both declines in banking deserts and increases in branches. Other states — Montana, Rhode Island, Minnesota, Vermont, Oklahoma, and New Hampshire — also had a net increase in branches but did not have a decrease in banking deserts.

## Banking Deserts Across Communities

Table 2 highlights the variation in banking desert changes across different communities. By metro status, most increases in deserts since the onset of the pandemic were in suburban areas (141 deserts), followed by urban (48 deserts) and rural areas (28 deserts). The populations living in banking deserts are also disproportionately suburban; 4.7 percent of the suburban population was living in banking deserts in 2023, compared with 2.8 percent in urban areas and 2.6 percent among rural populations. By income, most net desert increases were in MUI communities (161 deserts) rather than LMI communities (51 deserts), and the share of populations living in LMI deserts (3.2 percent) was significantly smaller than the share living in MUI deserts (4.0 percent).

The bulk of net desert increases since 2019 occurred in majority-White tracts (186 deserts). Although the percent change in deserts varied across tract majority race, the only group that gained deserts significantly faster than

the national rate of change was majority-Black tracts (10.1 percent). Population shares living in deserts tell a different story. Majority-American Indian and Alaska Native tract populations are disproportionately represented in deserts — 46.4 percent of the populations living in these tracts were living in banking deserts in 2023, over 12 times the national average of 3.8 percent. Notably, the CRA final rule explicitly acknowledges disproportionate barriers faced by Native populations in accessing banking and credit, and expands opportunities for banks to earn CRA credit through activities in Native Land Areas (BOG, FDIC, and OCC, 2023).

Across digital connectivity, age, and disability categories, the populations living in these tracts are disproportionately living in deserts. Among tracts with lower device and broadband access, 5.4 percent and 6.1 percent of the population are living in deserts, respectively, higher than the national average of 3.8 percent. Among tracts with concentrated older and disabled populations, 4.8 and 5.8 percent of the population are living in deserts, respectively.

# Banking Deserts Dashboard

The Federal Reserve has launched a dashboard that maps the banking deserts data analyzed in this report (Fed Communities, 2024). With the Banking Deserts Dashboard, users can quickly identify banking deserts and potential banking deserts across the country. It includes census tract-level data for the U.S. from 2019 to 2023. The visualizations enable users to identify the impacted communities and help inform the development of new solutions.

Source: Fed Communities, 2024

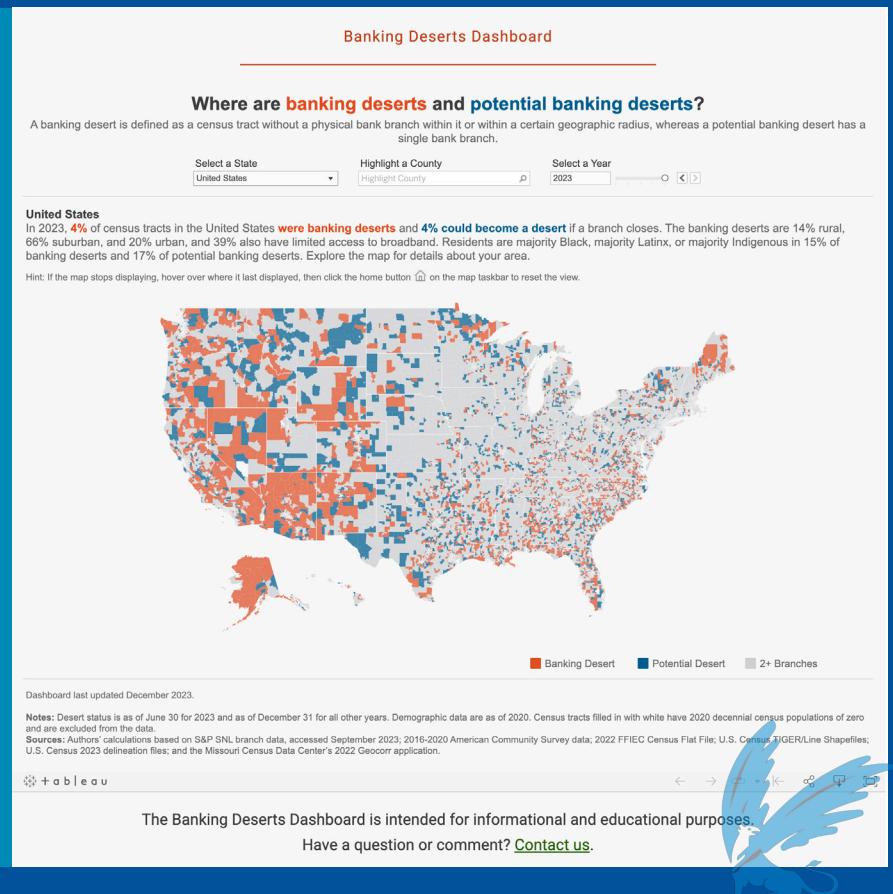


TABLE 2

## Banking Desert Changes Since the Onset of the COVID-19 Pandemic

Category	Total Census Tracts	Deserts 2019	Deserts 2023	2019–2023 Percent Change	Population of 2023 Deserts	Percent of Population Living in 2023 Deserts
Total	83,848	3,401	3,618	6.4%	12,283,793	3.8%
By tract metro status						
Rural	13,668	463	491	6.0%	1,174,327	2.6%
Suburban	41,186	2,254	2,395	6.3%	8,081,960	4.7%
Urban	28,994	684	732	7.0%	3,027,506	2.8%
By tract median family income						
LMI (<80% area median)	24,524	850	901	6.0%	2,946,219	3.2%
MUI	57,608	2,439	2,600	6.6%	9,180,658	4.0%
By tract majority race/ethnicity						
American Indian/Alaska Native	195	96	94	-2.1%	283,252	46.4%
Asian	873	4	4	0.0%	17,534	0.5%
Black	6,566	159	175	10.1%	599,777	2.8%
Hispanic	8,275	262	259	-1.1%	995,987	2.8%
White	56,280	2,622	2,808	7.1%	9,421,809	4.3%
Diverse (no predominant race)	11,659	258	278	7.8%	965,434	2.0%
By other categories						
Low device access	20,837	1,196	1,258	5.2%	3,785,518	5.4%
Low broadband access	20,837	1,347	1,417	5.2%	4,269,626	6.1%
High share of older residents	20,897	1,135	1,205	6.2%	3,387,870	4.8%
High share of disabled residents	20,862	1,240	1,331	7.3%	4,021,986	5.8%

Sources: Authors' calculations based on S&P SNL branch data, 2022 FFIEC Census Flat File, and 2016–2020 American Community Survey data.

Notes: Categorical sums may not match totals if category data are missing, e.g., a tract is not classified as LMI or MUI. Desert counts were as of December 2019 and mid-2023. All race categories are non-Hispanic, making the Hispanic and other race categories mutually exclusive. Diverse tracts are non-Hispanic tracts in which a single race does not make up more than 50 percent of the tract population. "Other categories" are not mutually exclusive.

## Banking Deserts: Average Distance to Nearest Branch

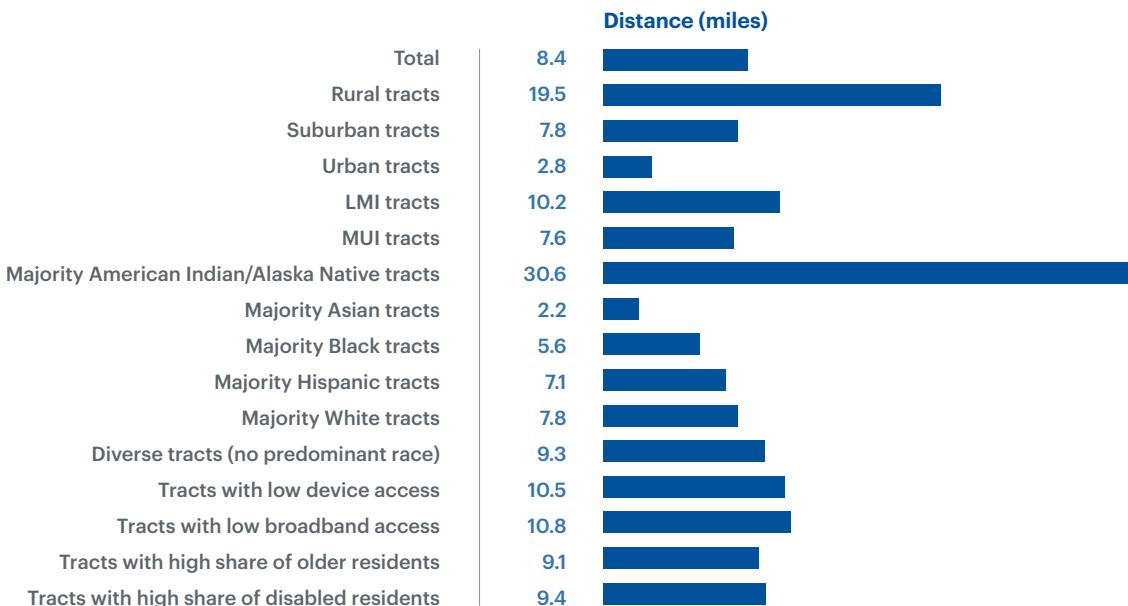
Figure 3 shows that among 2023 banking deserts, the average distance to the nearest branch from the population center of the tract was about 8.4 miles. This distance varies for rural, suburban, and urban tracts because of how we define deserts across these different geographies; the average distance for rural deserts was

about 19.5 miles, followed by 7.8 miles for suburban deserts and 2.8 miles for urban deserts.

By far, majority-American Indian and Alaska Native deserts had the highest average distance to the nearest branch of 30.6 miles, more than 50 percent greater than the average distance among rural tracts. Majority-Asian deserts had the lowest average distance of 2.2 miles. Deserts with low connectivity and high shares of older

FIGURE 3

## Among 2023 Banking Deserts, Average Distance to Nearest Bank Branch



Sources: Authors' calculations based on S&P SNL branch data, 2022 FFIEC Census Flat File, and 2016–2020 American Community Survey data.

Notes: Desert counts were as of mid-2023. All race categories are non-Hispanic, making the Hispanic and other race categories mutually exclusive.

and disabled residents all had higher distances to the nearest branch than the national average. Notably, we do not control for any potential confounding variables in this figure, so correlations with geography type, e.g., that tracts with lower broadband access may be disproportionately rural, are not considered.

## Trends in Potential Banking Deserts

While banking deserts offer a clear metric for measuring lack of bank branch access, they do not highlight census tracts that may become deserts. A potential desert — a census tract with one bank branch within the fixed distance of the census tract as defined for banking deserts or within the tract itself — offers the ability to identify census tracts that are at risk of becoming banking deserts.

Table 3 shows that the number of potential banking deserts in the U.S. increased by 129, or 4.4 percent, from 2,950 in 2019 to 3,079 in 2023. The number of people living in potential deserts increased from 10.5 million (3.2 percent of the population) in 2019 to 11.1 million (3.4 percent of the population) in 2023.<sup>19</sup>

There are also differences in potential banking deserts across communities. Contrary to banking deserts, urban areas saw the most increase in potential deserts (48 deserts), but rural (46 deserts) and suburban areas (35 deserts) were not far behind. Further, while there was more growth in potential deserts in MUI areas since the onset of the pandemic, LMI areas gained potential deserts at double the rate that MUI areas did. LMI communities gained 53

<sup>19</sup> The CRA NPR estimated 3.2 percent of the population was living in *potential banking deserts* in mid-2021 (BOG, FDIC, and OCC, 2022). Applying our methodology to their demographic and geographic boundary vintages (2015–2019 ACS), we estimate the percent of the population living in *potential banking deserts* in mid-2021 to be 3.1 percent. There are a few key differences in our methodology, namely that we use a stricter definition of “active branch” and that our data are more recent and have been retroactively updated to capture closures that occurred in 2020 and 2021.

TABLE 3

## Potential Banking Desert Changes Since the Onset of the COVID-19 Pandemic

Category	Total Census Tracts	Potential Deserts 2019	Potential Deserts 2023	2019–2023 Percent Change	Population of 2023 Potential Deserts	Percent of Population Living in 2023 Potential Deserts
Total	83,848	2,950	3,079	4.4%	11,078,100	3.4%
By tract metro status						
Rural	13,668	634	680	7.3%	1,776,678	3.9%
Suburban	41,186	1,695	1,730	2.1%	6,459,567	3.8%
Urban	28,994	621	669	7.7%	2,841,855	2.6%
By tract median family income						
LMI (<80% area median)	24,524	696	749	7.6%	2,565,583	2.8%
MUI	57,608	2,201	2,284	3.8%	8,420,240	3.6%
By tract majority race/ethnicity						
American Indian/Alaska Native	195	36	34	-5.6%	113,008	18.5%
Asian	873	1	2	100.0%	11,100	0.3%
Black	6,566	176	203	15.3%	685,068	3.1%
Hispanic	8,275	250	276	10.4%	1,112,376	3.1%
White	56,280	2,271	2,338	3.0%	8,242,089	3.8%
Diverse (no predominant race)	11,659	216	226	4.6%	914,459	1.9%
By other categories						
Low device access	20,837	1,040	1,115	7.2%	3,516,576	5.0%
Low broadband access	20,837	1,094	1,169	6.9%	3,707,674	5.3%
High share of older residents	20,897	978	1,023	4.6%	3,013,524	4.2%
High share of disabled residents	20,862	1,005	1,062	5.7%	3,319,290	4.8%

Sources: Authors' calculations based on S&P SNL branch data, 2022 FFIEC Census Flat File, and 2016–2020 American Community Survey data.

Notes: Categorical sums may not match totals if category data are missing, e.g., a tract is not classified as LMI or MUI. Potential desert counts were as of December 2019 and mid-2023. All race categories are non-Hispanic, making the Hispanic and other race categories mutually exclusive. Diverse tracts are non-Hispanic tracts in which a single race does not make up more than 50 percent of the tract population. "Other categories" are not mutually exclusive.

new potential deserts since 2019, a 7.6 percent increase, while MUI communities gained 83, a 3.8 percent increase.

Unlike banking deserts, communities with low device and broadband access and high shares of disabled residents experienced higher increases in potential banking deserts since 2019 compared with the national average. For areas with high shares of older residents, this change was not

significantly different from the nation overall. However, across tracts with low device access, low broadband access, high shares of disabled residents, or high shares of older residents, populations are overrepresented in potential banking desert populations, with at least 4.2 percent of their populations living in potential deserts.



# A Closer Look:

## The Fate of 2019's Potential Banking Deserts and Banking Deserts

Among the 2,950 potential banking deserts in 2019, 83.2 percent remained potential deserts through mid-2023. About 10.2 percent became deserts by mid-2023, with no other status changes in between. Another 5.8 percent of potential deserts were "cured," or had at least two bank branches within the tract's respective radius by mid-2023.

For nearly half (45.2 percent) of the 10.2 percent of 2019 potential deserts that became deserts, the last branch to close was a very large bank. Among the remaining 54.8 percent of 2019 potential deserts that became deserts, the last branch to close was that of a large bank for 16.9 percent, that of a community bank for 29.9 percent, and that of a credit union for 8.0 percent.<sup>18</sup>

For the 3,401 banking deserts in 2019, 96.6 percent remained banking deserts through mid-2023, with no other status changes. Other deserts were "partially cured," or changed to potential deserts (3.2 percent), and a small few were fully cured (0.3 percent) by mid-2023. Among the 2019 deserts that were either cured or partially cured, 45.0 percent of the branches that opened to cure them were those of community banks, 35.7 percent were those of credit unions, 15.5 percent were those of very large banks, and 3.9 percent were those of large banks.

## Case Studies of Strategies

Various strategies being implemented across the nation attempt to address the challenges branch closures may bring. In this section, we highlight some creative responses to declining bank branch access, although these strategies are not comprehensive and the efficacy of these responses remains to be seen.

### Expanded Financial Services

A strategy that has gained recent attention and is becoming increasingly popular is "mobile bank branches," buses that offer full-service banking in designated rotating locations. Small and large banks alike have introduced mobile bank branches to try to fill gaps in physical bank branches in communities (Bank of Bird-in-Hand, 2023; The PNC Financial Services Group, Inc., 2023; BankOnBuffalo, 2022). Some banks specifically target some of the communities of focus in this report with their mobile branches. A Pennsylvania community bank offers these mobile branches to rural communities with large Amish populations, while one in New York targets underserved communities and gathers input on future sites from the community itself (Bank of Bird-in-Hand, 2023; BankOnBuffalo, 2022).

Other banks have installed "Video Teller" versions of automated teller machines (ATMs), also called interactive teller machines (ITMs), which often take the place of a closed bank branch. Customers can travel to a Video Teller ATM location and video chat in real time with a bank teller (PeoplesBank, 2023; Equity Bank, 2023; Hawthorn Bank, 2023; First Liberty Bank, 2023; OceanFirst Bank, 2020). Although it is unclear how accessible these machines are for people with disabilities who may be unable to use similar online banking services, both Video Teller ATMs and mobile branches offer extensions of select physical banking services to communities that may otherwise be without access, without using as many resources as would be required to keep a full bank branch open.

Finally, the increasing capabilities of online banking make the expansion of broadband affordability and accessibility a clear area for innovation, along with improving the accessibility of online banking platforms. An increasing number of organizations are focusing on improving the accessibility of their online banking platforms. A recent report from the American Bankers Association that focused on digital accessibility encouraged banks to consider

using accessibility compliance score metrics to make their websites usable for all consumers (American Bankers Association, 2022).

## Expanded Financial Service Providers

A strategy that community banks, credit unions, and community development financial institutions (CDFIs) have implemented in response to branch closures is opening new branches in buildings previously occupied by larger banks. Examples span from a single Pennsylvania community bank opening a new branch in a shuttered Bank of America branch, to more complex relationships between institutions, such as a southern credit union partnering with Regions Bank to open several new credit union branches in donated buildings previously occupied by Regions branches (Kneller, 2023; Hope Credit Union, 2018). With community banks aiding with 45 percent of the cured 2019 deserts and credit unions curing 36 percent, this approach may prove worthwhile for maintaining community familiarity of and proximity to branches in the area.

CDFIs are also known to move into areas with scarce bank branches available, often targeting geographies with declining brick-and-mortar bank branches. Southern Bancorp, a southern CDFI, explicitly defines its target market as communities lacking traditional physical bank branches, spanning from rural to urban areas (Southern Bancorp, Inc., 2023). Under the CRA final rule, a new way for banks to earn CRA credit is by donating a branch, selling one on favorable terms, or making it available rent-free to a minority or women's depository institution, or a low-income credit union (BOG, FDIC, and OCC, 2023).<sup>20</sup>

These strategies demonstrate public concern for the impacts of the changing banking industry, although the efficacy of these responses remains to be seen. Further, while the in-person strategies highlighted may not fully supplement full-service banking, the digital strategies may not fully supplement in-person banking, either. There may not be a one-size-fits-all solution for every community or type of consumer. Rather, a multipronged approach may best mitigate potential negative consumer impacts if bank branch closures further accelerate.

## Summary

Since the onset of the COVID-19 pandemic, U.S. bank branches have declined by 5.6 percent, the number of banking deserts has increased by 217, and the population living in banking deserts has increased by over 760,000. The impacts of living in banking deserts will likely be felt differently across communities. Individuals facing other barriers to banking services and those who rely on in-person banking for accessibility reasons may be particularly at risk when there are no bank branches nearby, limiting opportunities to foster financial health and build wealth. Strategies such as mobile bank branches and video tellers are being explored in communities across the nation to mitigate the potential negative impacts of the changing landscape of in-person retail banking. New components of the CRA, introduced in the 2023 CRA final rule, may also change the way banks engage with consumers living in the communities highlighted. More work is needed to investigate the true impacts of branch closures, banking deserts, and the various response strategies being implemented across different types of communities.

<sup>20</sup> The CRA final rule also introduced other new ways for banks to earn credit based on their physical branches, acknowledging the importance of services in Native, distressed, and underserved areas; the impact of branch openings and closings on lower-income areas; as well as banks' share of branches in lower-income communities.

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# Appendix

## Data and Methodology

The analysis is based on the S&P Global Market Intelligence SNL U.S. Bank Branch Data Set (“S&P SNL branch data”). The S&P SNL branch data is updated frequently and provides information on branches from company websites, filings, merger news, and government sources. The data set features key variables including branch characteristics, latitude and longitude, and open and closed dates.

The study sample focuses on brick-and-mortar, non-in-store, full service, and retail branches from the end of 2019 through mid-2023.<sup>21</sup> We make a series of key data cleaning decisions in constructing the sample. First, we remove cases in which the branch status is “closed” but the closed date is missing, as well as cases in which the status is “active” but the closed date is populated. We also address a small sample of branches that are likely to be duplicates (3 percent), or cases in which the institution company name, first address line, and city match one or more other observations with overlapping open/closed dates. We make a series of decisions to identify the observation that is most likely accurate within each group of duplicates, leading us to retain about half of the 3 percent of observations identified as duplicates. We validated this method by manually verifying the status of branches in some states.

After removing the observations above, about 15 percent of the remaining observations from 2019 to 2023 have missing open dates. We include those observations in our analysis to avoid underestimating the number of active branches and overestimating the number of banking deserts. A cross examination of Summary of Deposits (SOD) data from the Federal Deposit Insurance Corporation, the main data source used to construct the non-credit union portion of the S&P SNL branch data, revealed that 99.4 percent of bank branch cases with

missing open dates that we identify as having stayed open at the end of 2019 were identified and active in the SOD data as of June 2019. Thus, we assume with great confidence that these branches were open in 2019.<sup>22</sup>

We use the latitude and longitude of bank branches in the S&P SNL branch data to geocode each branch to 2020 census tracts.<sup>23</sup> We use 2016–2020 American Community Survey (ACS) data and the 2022 FFIEC Census Flat File for relevant census data, U.S. Census TIGER/Line Shapefiles for geographic boundary computations, U.S. Census July 2023 delineation files for principal cities of metropolitan and micropolitan statistical areas,<sup>24</sup> and the Missouri Census Data Center’s 2022 Geocorr application for data on population-based tract centroids and the geographic relationships between tracts, metropolitan statistical areas, and principal city boundaries. Census tracts with no 2020 decennial census population were removed from the analysis.

Unless otherwise noted, in-text group comparisons are included if they are at least statistically significant at the 10 percent level, tested using two-proportion z-tests for proportional changes and sample proportions, and two-sample t-tests for differences in means.

## Terminology

### Metro Status

All tracts fall under three classifications: *Urban* areas refer to census tracts whose population lies primarily within both a metropolitan statistical area (MSA) and a principal city of its MSA, *suburban* areas refer to census tracts whose population lies primarily within an MSA but not within the principal cities of its MSA, and *rural* areas refer to census tracts whose population does not lie primarily within an MSA. Note that these definitions differ slightly from those used in the estimates of the CRA NPR, which uses area-

<sup>21</sup> Note that these criteria are stricter than those used in the estimates for the CRA NPR, which only required branches to be brick-and-mortar and full-service.

<sup>22</sup> Our results do not substantively change when we run the analysis without performing any of our data cleaning steps on the data or when we filter out cases with missing open dates.

<sup>23</sup> Most previous and recent analyses of bank branch data that incorporate census tract information use 2010 tracts. Since we are focusing on more recent years rather than a backward-looking time series, we are able to use more current information about tracts using 2020 tracts and demographic data. Running the analysis with 2010 tracts and demographic data resulted in smaller disparities and fewer significant differences across groups, suggesting that using newer data illuminates current disparities that older data do not capture.

<sup>24</sup> The full list is available at [www.census.gov/geographies/reference-files/time-series/demo/metro-micro/delineation-files.html](http://www.census.gov/geographies/reference-files/time-series/demo/metro-micro/delineation-files.html).

# Appendix

based (not population-based) estimates to determine whether a tract is in an MSA and principal city.

## Banking Deserts and Potential Banking Deserts

*Banking deserts* are defined as census tracts without any bank branches within a fixed-radius distance (two miles in urban areas, five miles in suburban areas, and 10 miles in rural areas) from the population-based centroid of the tract, or within the tract itself, based on the definition of areas with very low branch access in the Interagency Notice of Proposed Rulemaking to Implement the CRA (BOG, FDIC, and OCC, 2022).

*Potential banking deserts* use the same definition as banking deserts, except only one branch is present within the designated area. Note that for some census tracts, the radius distance does not fully encompass the tract boundaries. We use the combination of both the census tract area and the radius distance area for the banking desert (or potential banking desert) determination area, consistent with the Interagency CRA NPR.

## Tracts with Low Device Access

More than 12.3 percent of households in *tracts with low device access* do not have access to a computing device — a desktop, laptop, smartphone, tablet, or other computer. These tracts are in the top quartile of tracts for the percent of the tract's households that do not have access to a computing device.

## Tracts with Low Broadband Access

More than 21.5 percent of households in *tracts with low broadband access* do not have access to broadband internet. These tracts are in the top quartile of tracts for the percent of the tract's households that do not have access to broadband internet.

## Tracts with a High Share of Older Residents

More than 20.8 percent of residents in *tracts with a high share of older residents* are 65 years old or older. These tracts are in the top quartile of tracts for the percent of the tract's residents that are 65 years old or older.

## Tracts with a High Share of Disabled Residents

More than 16.8 percent of residents in *tracts with a high share of disabled residents* have a disability. These tracts are in the top quartile of tracts for the percent of the tract's residents that have a disability.



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