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# Bank Branch Closures and Banking Deserts in the Third Federal Reserve District States

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COMMUNITY DEVELOPMENT AND REGIONAL OUTREACH

by Alaina G. Barca and Lei Ding\*

\* The views expressed here are those of the authors and do not necessarily reflect the views of the Federal Reserve Bank of Philadelphia or the Federal Reserve System. The authors thank Joe Budash, Eileen Divringi, Kimberly Kreiss, Erin Mierzwa, Slava Mikhed, Samantha Porter, Davin Reed, Theresa Singleton, and Keith Wardrip for their helpful feedback and Theresa Dunne for her research support.

# Introduction

The COVID-19 crisis has accelerated the pace of bank branch closures, raising concerns regarding their impact on access to financial services in lower-income and minority communities. While developments in technology have allowed for more banking services to be conducted online, survey results have suggested that online banking users are only marginally less likely to visit local branches.<sup>1</sup> Depositors and small businesses have continued to rely on bank branches, at least during the prepandemic period. Bank branches are likely more important for residents of lower-income and minority communities, who more often lack Internet access or transportation to access branches farther away from their homes.<sup>2</sup> People are concerned whether such communities were particularly exposed to branch closures during the pandemic and whether the pandemic has led to the creation of more “banking deserts” — neighborhoods with no or very few bank branches nearby — in such communities.

The shrinking of the U.S. bank branch network since the Great Recession has been well documented.<sup>3</sup> The Third Federal Reserve District states of Pennsylvania, New Jersey, and Delaware (hereafter “Third District states”) are not exceptions. Banks and credit unions closed 13 percent of their branches in the Third District states between 2009 and 2019. While the forces driving the trend are not entirely clear, potential explanations at least include the lingering effects of the Great Recession, the consolidation of the banking industry, and the rise of online and mobile banking that likely led to decreased demand for physical branch services. Pandemic-induced health risks further reduced the demand for in-person banking services and likely accel-

erated banks’ existing plans for mergers and acquisitions, digital transformation, as well as branch closures.

While identifying the causes of branch closures is important, it is not the focus of this report. Instead, this report focuses on how branch closures vary across different geographies and whether recent branch closures and resulting banking deserts are disproportionately affecting lower-income and non-White communities. The analysis is based on S&P Global Market Intelligence, SNL U.S. Bank Branch Data (S&P SNL branch data), a comprehensive data set of bank branches that is updated frequently and provides information on branches from company websites, filings, merger news, and government sources.<sup>4</sup> The S&P SNL branch data set, which includes additional institutions such as credit unions and is updated more frequently, provides a fuller snapshot of the market than the widely used Federal Deposit Insurance Corporation (FDIC) Summary of Deposits data.<sup>5</sup>

This report documents closures of brick-and-mortar bank branches, including branches of commercial banks, savings and loan associations, and credit unions, during the pandemic in the Third District states. Overall, there was an accelerated trend of branch closures in the three states during the pandemic, with a decline in the number of active branches from 6,828 in 2019 to 6,201 by June 2022. An average net closure of about 251 branches per year more than doubled the prepandemic average closure rate of about 105 branches per year. The accelerated pace of branch closures led to a significant increase in the number of census tract banking deserts in the Third District states, from 48 deserts in 2019 to 63 deserts by June 2022, an increase of over 30 percent.<sup>6</sup>

<sup>1</sup> Elliot Anenberg, Andrew C. Chang, Serafin Grundl, Kevin B. Moore, and Richard Windle, “The Branch Puzzle: Why Are There Still Bank Branches?,” *FEDS Notes*, August 20, 2018. Available at [doi.org/10.17016/2380-7172.2206](https://doi.org/10.17016/2380-7172.2206).

<sup>2</sup> M. Margaret Dolcini, Jesse A. Canchola, Joseph A. Catania, et al., “National-Level Disparities in Internet Access Among Low-Income and Black and Hispanic Youth: Current Population Survey,” *Journal of Medical Internet Research*, 23:10 (2021), e27723, available at [doi.org/10.2196/27723](https://doi.org/10.2196/27723), and Kristen Broady, Mac McComas, and Amine Ouazad, *An Analysis of Financial Institutions in Black-Majority Communities: Black Borrowers and Depositors Face Considerable Challenges in Accessing Banking Services*, Washington, D.C.: Brookings Institute, 2021, available at [www.brookings.edu/research/an-analysis-of-financial-institutions-in-black-majority-communities-black-borrowers-and-depositors-face-considerable-challenges-in-accessing-banking-services/](https://www.brookings.edu/research/an-analysis-of-financial-institutions-in-black-majority-communities-black-borrowers-and-depositors-face-considerable-challenges-in-accessing-banking-services/).

<sup>3</sup> Kimberly M. Kreiss, “Bank Branches and COVID-19: Where Are Banks Closing Branches During the Pandemic?” *FEDS Notes*, December 17, 2021. Available at [doi.org/10.17016/2380-7172.3027](https://doi.org/10.17016/2380-7172.3027).

<sup>4</sup> S&P Global Market Intelligence, SNL U.S. Bank Branch Data, “Branch Analytics,” accessed October 2022.

<sup>5</sup> For more information about the data, sample, and terminology, see Appendix A.

<sup>6</sup> In this study, 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. For more information, see Appendix A. An alternative measure using county subdivisions is featured in Appendix B.

We find, however, that low- and moderate-income (LMI) and non-White<sup>7</sup> communities were generally no more likely to have been affected by pandemic-period branch closures than other communities. The net closure rates of bank branches in these communities were slightly lower than those in other communities. This could be explained by a different pattern of closures during the pandemic and the fact that these communities began the pandemic with fewer branches. The number of banking deserts in LMI, non-White, or rural tracts,<sup>8</sup> however, increased from six to 11 during the pandemic. Further study is still needed to monitor the trend of branch closures and to understand the long-term impact of living in banking deserts on the financial outcomes of residents in these communities.

## Bank Branch Closures Before and During the Pandemic

We first examine bank branch closures (including branches for credit unions) — both the absolute number and the

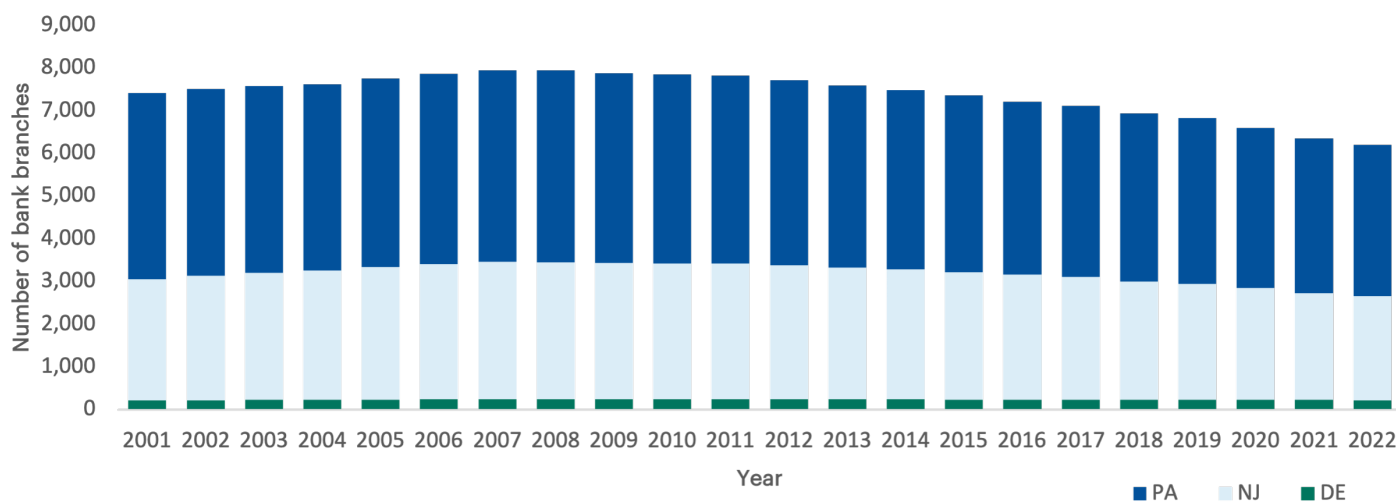
percent change of active bank branches — before and during the pandemic. Figure 1 shows the number of full-service brick-and-mortar retail branches of institutions in the data sample for each year from 2001 to 2022. The number of bank branches in the Third District states had been increasing steadily in the early 2000s, but branches started to decrease around 2008–2009 — long before the pandemic.

From 2009 to 2019, there was a net loss of 1,049 branches, about 13 percent of the 2009 total and an average loss of 105 branches per year (see Table 1). The closures were largely driven by larger banks. Relatively, large banks (with assets of between \$10 and \$50 billion in 2021) experienced a net loss of 339 branches (or 25 percent) during the 10-year prepandemic period, and very large banks (with assets of at least \$50 billion) experienced a net loss of 861 branches (22 percent). In contrast, the number of branches for community banks (with assets below \$10 billion) and credit unions increased by 151 during the same period. The percent decline was modestly larger in low- and moderate-income, non-White, and urban communities. For exam-

<sup>7</sup> Tracts are classified as non-White if more than 50 percent of their residents are non-White, where White is defined as White and non-Hispanic.

<sup>8</sup> Tracts are usually relatively homogeneous areas containing about 4,000 people. Low- and moderate-income is defined by the 2011–2015 American Community Survey data used by the CRA during the 2017–2021 period: Low- and moderate-income tracts are those with family income levels that are less than 80 percent of the area median income.

**FIGURE 1** Total Number of Bank Branches in Third District States



Source: Authors' calculations based on S&P SNL branch data.

Notes: Only brick-and-mortar, non-in-store, full-service, and retail branches for all types of banks and credit unions. Branch counts were as of December for all years except 2022, in which counts were as of June.

ple, the number of branches in low- and moderate-income tracts declined by 16 percent from 2009 to 2019, larger than the 12 percent decline in middle- and upper-income tracts. The declines were also larger in non-White tracts (15 percent) and urban tracts (16 percent) relative to those in majority-White or suburban and rural areas, as were the declines in New Jersey (15 percent) and Pennsylvania (13 percent) relative to that in Delaware (6 percent).

Bank branches closed at accelerated rates during the pandemic, with a net loss of 627 branches, or an average loss of 251 branches per year, from 2019 to June 2022 (see Table 2). The closures were still largely driven by large (17 percent) and very large (12 percent) banks, but community banks experienced a net loss (4 percent) in their branch networks as well. For credit unions, the number of active branches decreased only marginally during the same period. For individual banks, PNC Bank experienced the largest net loss, at 104 branches, during the pandemic, followed by Wells Fargo (64) and Santander Bank (42). Mergers and acquisitions, digital transformation, and pandemic-induced changes in the demand for in-person banking services were often cited as the major drivers for recent bank branch closures.

Branches in low- and moderate-income tracts and non-White tracts, however, were less likely to be affected by closures during the pandemic than were other communities. From 2019 to June 2022, the annual pace of branch closures accelerated in both LMI and middle- and upper-income (MUI) areas, but the percent decline was slightly larger in MUI areas compared with LMI areas (10 percent for MUI tracts versus 8 percent for LMI tracts). This is different from the trend in previous years, which showed a larger decline in LMI areas (Tables 1 and 2).

Similarly, the percent decline in the number of branches in non-White areas was smaller from 2019 through 2022

compared with predominantly White areas (8 percent in non-White tracts and 9 percent in majority-White tracts) during the pandemic.

Branches in rural areas and suburban areas experienced larger losses during the pandemic than did urban areas (a net loss of 9 percent in rural areas and 10 percent in suburban areas, slightly higher than the decline of 7 percent in urban areas). This trend differs from the expectation of a larger decline in urban areas, which usually bear the higher health risks of contagious diseases, but this may be explained by the expansion of certain large banks in the major cities of the Third District states.<sup>9</sup> The losses in New Jersey (10 percent) and Pennsylvania (9 percent) were larger than that in Delaware (4 percent), continuing a similar trend from previous years.

## Consequences of Branch Closures

### Banking Desert Trends

Increased branch closures inevitably led to a decrease in branches per capita and, under certain circumstances, an increase in the number of communities with no or very few branches. A banking desert is usually defined as an area with no bank branches, but there is no consensus on how large such areas should be.<sup>10</sup> Built upon the definition of *areas with very low branch access* in the Interagency Notice of Proposed Rulemaking to Implement the CRA (Community Reinvestment Act) (the Interagency CRA NPR),<sup>11</sup> a banking desert is defined in this report as a census tract that has no branch within a defined radius of the tract's center of population (two miles in urban areas, five miles in suburban areas, and 10 miles in rural areas). Different distance thresholds are used to account for variations in spatial density and transit modes for urban, suburban,

<sup>9</sup> For example, JPMorgan Chase has opened 12 urban branches in the Third District states since 2020, the most of any bank.

<sup>10</sup> Individuals could access banking services by driving to branches farther away from their homes or accessing banking services through online, mobile, or other digital channels. But lower-income individuals often experience challenges accessing some of the digital infrastructure. See Federal Deposit Insurance Corporation (FDIC), *How America Banks: Household Use of Banking and Financial Services*, Washington, D.C.: FDIC, 2020; FDIC, *2021 FDIC National Survey of Unbanked and Underbanked Households*, Washington, D.C.: FDIC, 2022; and Federal Reserve Bank of Dallas, *Closing the Digital Divide: A Framework for Meeting CRA Obligations*, Dallas: Federal Reserve Bank of Dallas, 2016.

<sup>11</sup> See [www.federalreserve.gov/consumerscommunities/files/cra-npr-fr-notice-20220505.pdf](https://www.federalreserve.gov/consumerscommunities/files/cra-npr-fr-notice-20220505.pdf) for the full text.

TABLE 1

## Prepandemic Branch Closures

	2009	2019	Change (2009–2019)	Percent Change (2009–2019)
<b>Total</b>	7,877	6,828	-1,049*	-13%
Closures			2,293*	
Openings			975*	
<b>By bank type</b>				
Community banks (<\$10B)	1,805	1,948	143	8%
Large banks (\$10B–\$50B)	1,359	1,020	-339	-25%
Very large banks (>=\$50B)	3,878	3,017	-861	-22%
Credit unions	835	843	8	1%
<b>By tract urban/rural status</b>				
Urban	991	836	-155	-16%
Suburban	6,086	5,286	-800	-13%
Rural	800	706	-94	-12%
<b>By tract median family income</b>				
LMI tracts (<80% area median)	1,649	1,379	-270	-16%
MUI tracts	6,191	5,419	-772	-12%
<b>By tract race/ethnicity</b>				
Majority White	6,655	5,786	-869	-13%
Majority non-White	1,218	1,039	-179	-15%
<b>By state</b>				
Pennsylvania	4,441	3,883	-558	-13%
New Jersey	3,188	2,713	-475	-15%
Delaware	248	232	-16	-6%

Sources: Authors' calculations based on S&P SNL branch data and the 2019 FFIEC Census Flat File.

Notes: Only brick-and-mortar, non-in-store, full-service, and retail branches are included for all types of banks and credit unions.

\*Net openings minus closures may not equal the total change in active banks because closures are inclusive of all branches, even when the open date is missing, whereas openings and active branches counts are not inclusive of cases with missing open dates.

TABLE 2

## Branch Closures During the Pandemic

	2019	2022	Change (2019–2022)	Percent Change (2019–2022)
<b>Total</b>	6,828	6,201	-627*	-9%
Closures			948*	
Openings			226*	
<b>By bank type</b>				
Community banks (<\$10B)	1,948	1,861	-87	-4%
Large banks (\$10B–\$50B)	1,020	844	-176	-17%
Very large banks (>=\$50B)	3,017	2,659	-358	-12%
Credit unions	843	837	-6	-1%
<b>By tract urban/rural status</b>				
Urban	836	777	-59	-7%
Suburban	5,286	4,783	-503	-10%
Rural	706	641	-65	-9%
<b>By tract median family income</b>				
LMI tracts (<80% area median)	1,379	1,272	-107	-8%
MUI tracts	5,419	4,902	-517	-10%
<b>By tract race/ethnicity</b>				
Majority White	5,786	5,242	-544	-9%
Majority non-White	1,039	957	-82	-8%
<b>By state</b>				
Pennsylvania	3,883	3,544	-339	-9%
New Jersey	2,713	2,434	-279	-10%
Delaware	232	223	-9	-4%

Sources: Authors' calculations based on S&P SNL branch data and the 2019 FFIEC Census Flat File.

Notes: 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 in 2019 and as of June in 2022.

\*Net openings minus closures may not equal the total change in active banks because closures are inclusive of all branches, even when the open date is missing, whereas openings and active branches counts are not inclusive of cases with missing open dates.

and rural geographies; this should help mitigate the limitation of using a fixed distance for geographies with varying levels of population density.<sup>12</sup>

As Table 3 summarizes, a total of 48 tracts in the Third District states would have been considered banking deserts by this definition as of the end of 2019. Almost all the deserts (46 out of 48) were in suburban areas, except one in an urban area and one in a rural area.<sup>13</sup> By June 2022, the number of bank-

<sup>12</sup> All tracts were classified into three areas: “Urban areas” refer to census tracts located within a metropolitan statistical area (MSA) whose population lies primarily within a principal city of its MSA, “suburban areas” refer to census tracts located within an MSA whose population lies primarily outside of the principal cities of its MSA, and “rural areas” refer to census tracts that do not fall entirely within an MSA. Principal cities are detailed by the U.S. Office of Management and Budget, “2010 Standards for Delineating Metropolitan and Micropolitan Statistical Areas.” The full list is available at [www2.census.gov/programs-surveys/metro-micro/geographies/reference-files/2009/historical-delineation-files/list2.txt](http://www2.census.gov/programs-surveys/metro-micro/geographies/reference-files/2009/historical-delineation-files/list2.txt). See Appendix A for more details.

<sup>13</sup> The prevalence of deserts in suburban areas is largely driven by the use of a shorter distance of five miles to identify banking deserts in suburban areas (if a 10-mile radius is used across all types of geography, the number of banking deserts would be only two, one being suburban and the other being rural).

**TABLE 3**

Change in the Number of Banking Deserts During the Pandemic

	Urban		Suburban		Rural		All Tracts	
	2019	2022	2019	2022	2019	2022	2019	2022
<b>Number of desert tracts</b>	1	2	46	57	1	4	48	63
<b>Total number of tracts</b>	968		3,911		547		5,426	
<b>Average tract median household income</b>								
<b>All desert tracts</b>	\$44,185	\$60,804	\$56,043	\$55,330	\$40,529	\$37,715	\$55,473	\$54,385
<b>All tracts</b>	\$38,591		\$72,030		\$47,820		\$63,624	
<b>By tract median family income</b>								
<b>LMI tracts (&lt;80% area median)</b>	0	0	4	6	0	0	4	6
<b>MUI tracts</b>	1	2	40	49	1	4	42	55
<b>By tract race/ethnicity</b>								
<b>Majority White</b>	1	2	44	54	1	4	46	60
<b>Majority non-White</b>	0	0	1	2	0	0	1	2
<b>By state</b>								
<b>Pennsylvania</b>	0	0	34	42	1	4	35	46
<b>New Jersey</b>	1	2	8	11	0	0	9	13
<b>Delaware</b>	0	0	4	4	0	0	4	4

Sources: Authors’ calculations based on S&P SNL branch data and the 2019 FFIEC Census Flat File.

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 in 2019 and as of June in 2022. FFIEC derives tract median household income from the 2011–2015 American Community Survey.



## 2022 Banking Deserts in LMI, Rural, and Majority Non-White Tracts in Third District States

Tract	County	State	Metro Status	LMI/MUI Status	Percent LMI	Majority Race	Percent White	Percent Black	Percent Hispanic	Population
34001010600	Atlantic	NJ	Suburban	LMI	50%	Non-White	43%	21%	31%	4,246
42007602800	Beaver	PA	Suburban	LMI	75%	White	66%	22%	7%	2,589
42053530300	Forest	PA	Rural	MUI	52%	White	98%	0%	0%	1,174
42105950500	Potter	PA	Rural	MUI	49%	White	98%	1%	0%	2,039
42123971400	Warren	PA	Rural	MUI	45%	White	98%	0%	0%	1,870
34011010103	Cumberland	NJ	Suburban	-	-	Non-White	21%	60%	19%	4,569
42005950200	Armstrong	PA	Suburban	LMI	33%	White	98%	0%	1%	2,228
42033331500	Clearfield	PA	Rural	MUI	46%	White	99%	0%	0%	1,928
42049010101	Erie	PA	Suburban	LMI	52%	White	99%	0%	0%	3,400
42103950302	Pike	PA	Suburban	LMI	33%	White	97%	0%	0%	759
42103950801	Pike	PA	Suburban	LMI	45%	White	63%	14%	20%	4,961

Sources: Authors' calculations based on S&P SNL branch data, the 2019 FFIEC Census Flat File, and ACS 2011–2015 Low- and Moderate-Income Summary Data.

Notes: Percent LMI is estimated based on the LMI Summary Data's counts of individuals who are LMI, while LMI/MUI status is based on whether the tract is LMI.

ing deserts increased to 63, which contained about 231,000 people (about 1 percent of the total population of the three states), with an increase of 15 deserts and about 48,000 more residents living in banking deserts since 2019.

Figures 2 and 3 map all banking desert tracts (shaded dark blue) and potential banking deserts<sup>14</sup> (shaded light blue) in 2019 and 2022, clearly showing that most banking deserts are in sparsely populated areas but are still within metropolitan statistical areas (MSAs). Figure 2 shows a strong pres-

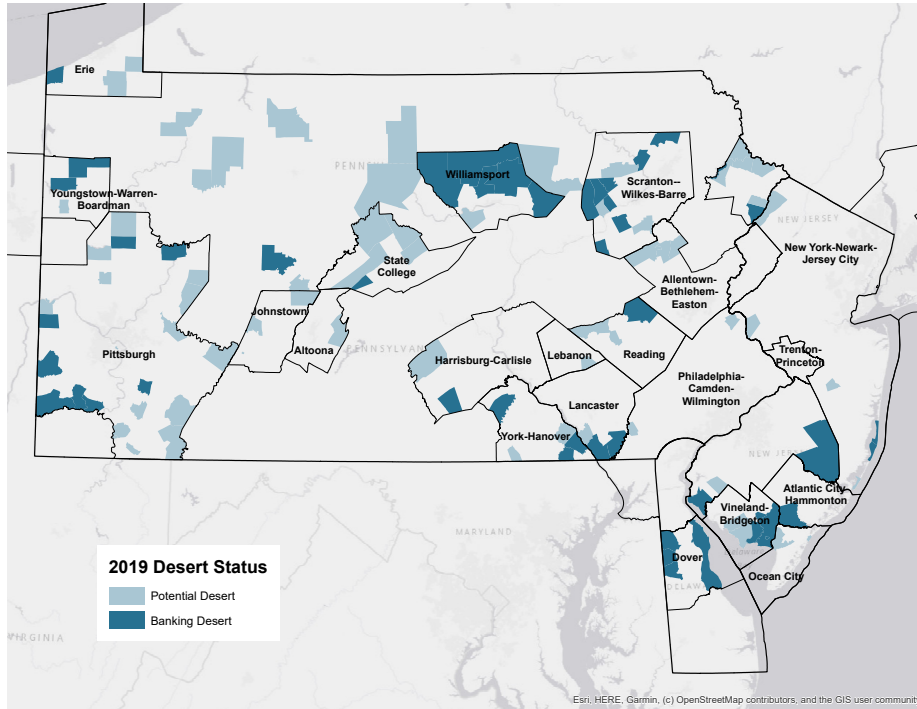
ence of 2019 banking deserts in the Williamsport, PA; Scranton–Wilkes-Barre, PA; Dover, DE; Vineland–Millville–Bridgeton, NJ; and Pittsburgh, PA, metropolitan areas. Also of note is the presence of potential banking deserts in and around State College, PA.

Figure 3 helps visualize the increase in banking deserts from 48 in 2019 to 63 in 2022, as well as the transition of some 2019 potential deserts into banking deserts in 2022. For example, State College saw one of its potential deserts

<sup>14</sup> In this study, potential banking deserts are defined as census tracts in which there is only one bank branch 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. For more information, see Appendix A.

FIGURE 2

### Banking Deserts and Potential Banking Deserts in 2019

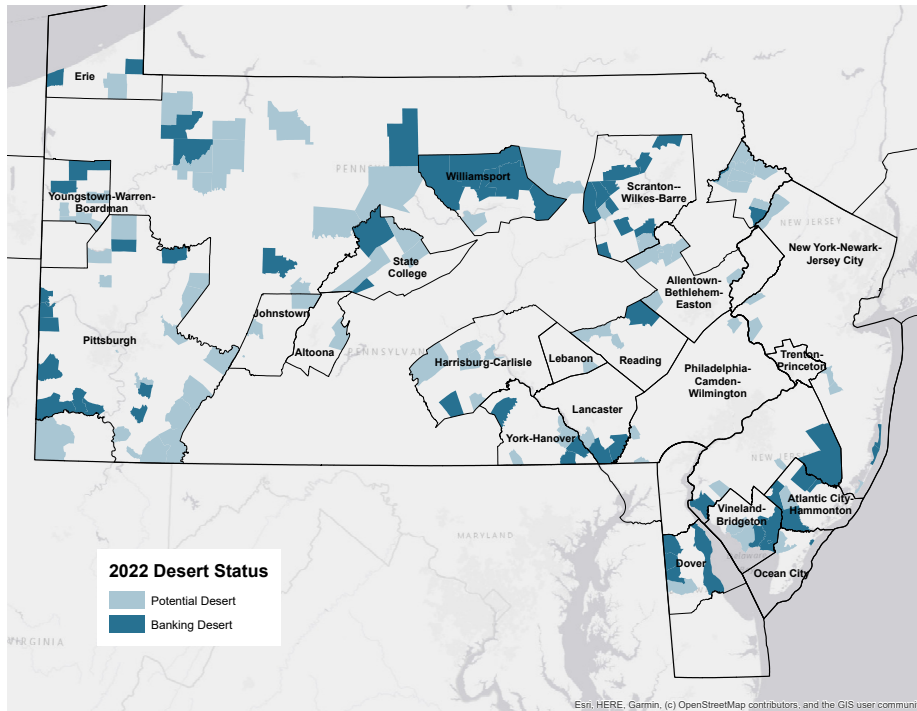


Source: Authors' calculations based on S&P SNL branch data and U.S. Census TIGER/Line Shapefiles.

Notes: 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.

FIGURE 3

### Banking Deserts and Potential Banking Deserts in 2022



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

Notes: 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.

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## A Closer Look: Scranton–Wilkes-Barre, PA MSA

The Scranton–Wilkes-Barre, PA metropolitan area contains 10 banking deserts as of 2022, the most of any metropolitan area within the Third District. The MSA has a population of 562,000. Of its 170 census tracts, 48 of them are LMI, nine are majority non-White, 43 are urban, and 127 are suburban.

Twenty-five of the MSA's 218 branches closed since 2019, leaving it with 193 branches in 2022, an 11 percent decline. During this time, two new banking deserts were created in this MSA, both of which were previously potential deserts with just one branch. The MSA's 10 deserts have a total population of about 32,000 residents, which is 5.7 percent of its total population. All 10 deserts are in suburban tracts, and none are in LMI or majority non-White tracts. The percent of the population living in banking deserts that are LMI individuals is 1.8 percent.

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## A Closer Look: Williamsport, PA MSA

Although it does not have the largest number of banking deserts or population living in deserts, the Williamsport, PA, metropolitan area has the largest share of residents living in banking deserts of any MSA fully within the Third District states. Of its total population of almost 117,000 residents, nearly 19,000 residents were living in its five deserts in 2022, which is 16 percent of the population.

Between 2019 and 2022, it experienced a net loss of two bank branches (a decrease from 51 to 49 branches). The number of deserts remained five during this time. Of the MSA's 29 tracts, six are LMI, one is majority non-White, nine are urban, and 20 are suburban. All five of its deserts are in suburban tracts, and none are in LMI or majority non-White tracts. The percent of the population living in banking deserts that are LMI individuals is 4.9 percent.

become a desert in 2022, Scranton–Wilkes-Barre gained two deserts, both of which were previously potential deserts, and the Atlantic City-Hammonton, NJ MSA gained three deserts and one potential desert in 2022. The map also demonstrates that all of the 48 banking deserts present in 2019 persisted as banking deserts into 2022.

A look at banking deserts within MSAs in Table 4 reveals that some MSAs have more deserts than others. The changes in deserts between 2019 and 2022 for two MSAs are highlighted to the left.

## Banking Deserts in Low- and Moderate- Income and Non- White Tracts

A *banking desert* is not necessarily the same as *banking services desert*. The absence of a physical branch might matter less for consumers with Internet access who can access some banking services online and for residents with ready access to transportation. Thus, these deserts could become a more serious issue for lower-income individuals in these neighborhoods or any residents in lower-income and non-White neighborhoods. Overall, the number of LMI individuals in the Third District states living in a banking desert increased from about 64,500 in 2019 to 84,700 in 2022, a 30 percent increase. Relative to the total population, however, this number remains small, at 0.4 percent. Nonetheless, we suspect banking deserts may be a serious issue for more vulnerable communities, such as LMI tracts, as well as majority non-White and rural tracts. The discussion that follows focuses on residents in those banking deserts.

TABLE 4

## Bank Closures and Banking Deserts by MSA

MSA	Total Population (2015)	Deserts in 2019				Deserts in 2022			
		Total Deserts	Percent of Population Living in Deserts	Percent of Population Living in Deserts That Are LMI Individuals	Percent of Population Living in LMI, Rural, or Majority Non-White Deserts	Total Deserts	Percent of Population Living in Deserts	Percent of Population Living in Deserts That Are LMI Individuals	Percent of Population Living in LMI, Rural, or Majority Non-White Deserts
Scranton-Wilkes-Barre, PA	561,701	8	4.5%	1.4%	0.0%	10	5.7%	1.8%	0.0%
Williamsport, PA	116,656	5	16.2%	4.9%	0.0%	5	16.2%	4.9%	0.0%
Atlantic City-Hammonton, NJ	275,376	1	1.8%	0.6%	0.0%	4	8.3%	3.3%	1.5%
Dover, DE	169,509	4	10.7%	4.4%	0.0%	4	10.7%	4.4%	0.0%
Vineland-Millville-Bridgeton, NJ	155,186	4	11.1%	3.5%	2.9%	4	11.1%	3.5%	2.9%
York-Hanover, PA	439,660	3	3.2%	1.1%	0.0%	3	3.2%	1.1%	0.0%
Lancaster, PA	530,216	2	2.6%	1.1%	0.0%	2	2.6%	1.1%	0.0%
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	5,933,720	2	0.1%	0.0%	0.0%	2	0.1%	0.0%	0.0%
State College, PA	157,823	1	1.7%	0.4%	0.0%	2	3.6%	1.1%	0.0%
Harrisburg-Carlisle, PA	558,198	1	0.8%	0.2%	0.0%	1	0.8%	0.2%	0.0%
Ocean City, NJ	95,805	0	0.0%	0.0%	0.0%	1	0.9%	0.3%	0.0%
Reading, PA	413,965	1	1.9%	0.6%	0.0%	1	1.9%	0.6%	0.0%
Allentown-Bethlehem-Easton, PA-NJ	828,232	0	0.0%	0.0%	0.0%	0	0.0%	0.0%	0.0%
Altoona, PA	126,448	0	0.0%	0.0%	0.0%	0	0.0%	0.0%	0.0%
Johnstown, PA	139,381	0	0.0%	0.0%	0.0%	0	0.0%	0.0%	0.0%
Lebanon, PA	135,776	0	0.0%	0.0%	0.0%	0	0.0%	0.0%	0.0%
Trenton-Ewing, NJ	370,212	0	0.0%	0.0%	0.0%	0	0.0%	0.0%	0.0%
Non-Third District MSAs	9,391,523	15	0.5%	0.2%	0.1%	20	0.7%	0.3%	0.1%
No MSA (rural)	2,209,190	1	0.1%	0.0%	0.1%	4	0.3%	0.2%	0.3%
<b>Total</b>	<b>22,608,577</b>	<b>48</b>	<b>0.8%</b>	<b>0.3%</b>	<b>0.1%</b>	<b>63</b>	<b>1.0%</b>	<b>0.4%</b>	<b>0.1%</b>

Sources: Authors' calculations based on S&P SNL branch data, the 2019 FFIEC Census Flat File, and ACS 2011–2015 Low- and Moderate-Income Summary Data.

Notes: 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 in 2019 and as of June in 2022. The row "Non-Third District MSAs" includes the Pennsylvania, New Jersey, and Delaware portions of MSAs that are not fully within the Third District. LMI individuals are estimated based on the LMI Summary Data's counts of individuals who are LMI, while LMI tract populations include anyone living in a tract classified as LMI.

By the end of 2019, 42 out of the 46 banking deserts with nonmissing income information were in MUI tracts, while only four deserts were in LMI tracts. By population, the proportion of the MUI-tract population living in deserts (1.0 percent) was also greater than the proportion of the LMI-tract population living in deserts (0.2 percent). Banking deserts were also disproportionately likely to be in majority-White tracts. Overall, 46 out of the 48 banking deserts in 2019 were in majority-White tracts, and there was only one desert among non-White tracts.<sup>15</sup> By population, 1.0 percent of majority-White tract populations lived in deserts, compared with 0.1 percent of non-White tract populations.

In short, an LMI tract or a non-White tract was less likely to be a banking desert than other tracts. This pattern could be largely explained by the concentration of lower-income and non-White tracts in densely populated urban areas close to downtowns or business centers that usually have extensive

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<sup>15</sup> Categorical sums may not match totals if category data are missing, e.g., a tract does not have a population large enough to have a majority race. In this case, the remaining tract has a population of 0.

<sup>16</sup> Jeff Ward, "Wells Fargo Closing Branch in Norristown Area as Customers Move Toward Digital Banking," WFMZ-TV 69 News, December 6, 2022. Available at [www.wfmz.com/news/area/southeastern-pa/wells-fargo-closing-branch-in-norristown-area-as-customers-move-toward-digital-banking/article\\_d14a6f10-75b4-11ed-9c68-43826613a7f4.html](http://www.wfmz.com/news/area/southeastern-pa/wells-fargo-closing-branch-in-norristown-area-as-customers-move-toward-digital-banking/article_d14a6f10-75b4-11ed-9c68-43826613a7f4.html).

<sup>17</sup> OceanFirst Financial Corp., "OceanFirst Financial Corp.: Investor Day," PowerPoint presentation, OceanFirst Investor Day, August 5, 2021. Available at [investorday2021.oceanfirst.com/presentation](http://investorday2021.oceanfirst.com/presentation).

<sup>18</sup> Northwest Bancshares, Inc., "Northwest Bancshares, Inc. Completes Merger with MutualFirst Financial, Inc.," press release, April 24, 2020. Available at [investorrelations.northwest.bank/news/News-details/2020/Northwest-Bancshares-Inc.-Completes-Merger-with-MutualFirst-Financial-Inc-2020-4-24/default.aspx](http://investorrelations.northwest.bank/news/News-details/2020/Northwest-Bancshares-Inc.-Completes-Merger-with-MutualFirst-Financial-Inc-2020-4-24/default.aspx).

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## A Closer Look: Census Tract 106 in Egg Harbor City, NJ

Census tract 106 in Egg Harbor City, NJ, is an LMI suburban community in Atlantic County with a population of 4,246. It is just over 10 miles from the boundary of the nearest principal city, Hammonton, NJ. The median household income is \$43,235, the poverty rate is 16 percent, and 50 percent of the individuals living in the tract are LMI. The tract is 43 percent White, 21 percent Black, 31 percent Hispanic, and 5 percent Asian.

As of 2014, the tract had two active branches within a five-mile radius. The banks were Wells Fargo and OceanFirst. In 2020, both branches closed, making the tract a banking desert.

Wells Fargo has cited "digital banking, market factors, and economic trends" as its reasons for closing many of its branches of late.<sup>16</sup> While OceanFirst has cited similar reasons for its closures, it has also announced goals to expand geographically, which entails closing more densely populated areas within its current coverage.<sup>17</sup>

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## A Closer Look: Census Tract 9505 in Galeton, PA

Census tract 9505 in Galeton, PA, is an MUI rural community in Potter County with a population of 2,039. It is about 45 miles outside of the boundary of the nearest principal city, Williamsport, PA. The median household income is \$40,761, the poverty rate is 17 percent, and 49 percent of the individuals living in the tract are LMI. The tract is 98 percent White, 1 percent Black, and less than 1 percent Hispanic or Asian.

As of 2000, the tract had one active branch within a 10-mile radius, Northwest Bank. In 2020, the branch closed, making the tract a banking desert.

Although Northwest has cited common reasons for closing many branches across Pennsylvania, it also merged with MutualFirst Financial in 2020. It released no statements connecting the merger with branch closings.<sup>18</sup>



branch networks, as opposed to sparsely populated rural or suburban areas with fewer branches.

Potentially more worrisome are the relative increases in the number of LMI and non-White banking deserts during the pandemic, although the number of such banking deserts is still quite small. The number of banking deserts increased from four to six in LMI tracts, from one to two for deserts in non-White tracts, and from one to four for deserts in rural areas. The number of residents in LMI banking deserts increased from about 11,000 in 2019 to 18,000 in 2022, or an increase of 60 percent. About 9,000 residents were living in non-White banking deserts in 2022.

Overall, LMI and non-White communities were generally no more likely to be affected by branch closures during the pandemic than were other communities, and the share of residents living in banking deserts was marginal: The share of residents in banking deserts increased from 0.8 percent of the total population in 2019 to 1.0 percent in 2022, and the share of residents in lower-income and non-White deserts was even smaller. A closer examination of select newly formed banking deserts featured on the preceding page suggests many may be due to mass closures by large banks because of popularly cited reasons, including increased usage of online banking, market demand since the onset of the pandemic, and economic efficiency.<sup>19</sup>

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<sup>19</sup> Jad Edlebi, Bruce C. Mitchell, and Jason Richardson, *The Great Consolidation of Banks and Acceleration of Branch Closures Across America*. Washington, D.C.: NCR, February 2022. Available at [nrc.org/the-great-consolidation-of-banks-and-acceleration-of-branch-closures-across-america/](https://nrc.org/the-great-consolidation-of-banks-and-acceleration-of-branch-closures-across-america/).

# Summary

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Banks closed an unprecedented number of retail branches in the Third District states during the pandemic. These closures could hurt consumers and communities, especially in lower-income, non-White, or rural communities because closures could reduce access to mainstream financial services for residents in those communities. We find there were substantial decreases in the number of branches in those neighborhoods during the pandemic, but closures were no more likely to be concentrated in those neighborhoods. However, these vulnerable communities experienced larger losses in the prepandemic period and may have had fewer branches to lose.

The closure of bank branches could create new banking deserts in which communities are without access to a bank or credit union within a fixed distance. We find an increase in the share of lower-income individuals living in banking deserts during the pandemic, as well as an increase in the number of banking deserts in lower-income and non-White tracts. Low- and moderate-income individuals and businesses in banking deserts may face increased challenges in accessing retail products and services, limiting their opportunity to improve their financial health and accumulate wealth. The 2022 Interagency CRA NPR proposes several options that regulators can consider in banks' CRA evaluations to incentivize banks to open new branches in such deserts or retain existing branches in at-risk communities. These proposals, together with existing practices of evaluating banks' branch distribution among neighborhoods with different incomes under the CRA, have the potential to improve branch availability and services in less advantaged communities.

Of course, the share of residents in low- and moderate-income, non-White, or rural banking deserts was small, and these communities were generally no more likely to be affected by the pandemic-period branch closures than other communities. More research is still needed to evaluate the long-term impact of branch closures and banking deserts, as well as the effectiveness of various policies designed to improve bank retail services, on such neighborhoods.

### Constructing the Data Sample

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 are a comprehensive data set of bank branches that is updated frequently and provides information on branches from company websites, filings, merger news, and government sources. Compared with the widely used Federal Deposit Insurance Corporation Summary of Deposits (SOD) data, the S&P SNL branch data provide a fuller snapshot of the market by including additional institutions such as credit unions and providing timely updates between the intervals of annual SOD data. The data also provide latitude and longitude coordinates for each branch, which we use to geocode branches to 2010 census tracts. We use 2011–2015 American Community Survey (ACS) data from the 2019 FFIEC Census Flat File for relevant census data, the ACS 5-Year 2011–2015 Low- and Moderate-Income Summary Data from the Department of Housing and Urban Development for counts of LMI individuals, U.S. Census TIGER/Line Shapefiles for geographic boundary computations, and the Missouri Census Data Center’s 2018 Geocorr application for data on population-based tract centroids and areal overlap between tracts, county subdivisions, and principal city boundaries.

The study sample focuses on brick-and-mortar, non-in-store,<sup>20</sup> full-service, and retail branches from 2001 through June 2022. We include all types of banks and credit unions in this analysis. We make a series of key data cleaning decisions in constructing our 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. Additionally, nearly 13 percent of the Third District states’ branch observations have missing open dates. Since this is such a large portion of observations, we treat them with a nuanced approach to avoid underestimating or overestimating various metrics. Counts of closings (cases where a closed date is present in a given year) are inclusive of those with missing open

dates. Counts of openings and counts of active branches are not inclusive of those with missing open dates. Thus, openings minus closures may not equal the total change in active banks. Banking desert metrics are inclusive of branches with missing open dates to not overestimate the number of banking deserts. Thus, we presume our counts of active branches are underestimates and our counts of banking deserts should be a lower bound as well.

We also dropped a very small sample of branches that are likely to be duplicates (1 percent), or cases in which institution company name, first address line, and city are the same as one or more other observations with overlapping open/close dates. We attempt to identify the most accurate duplicate per group using other data (open and close dates, revenue, etc.), recommendations from a team at S&P, and independent research. Census tracts with no residential population were removed from the analysis.

Note that when discussing counts of branches within the Third District states, counts are strictly within the boundaries of the respective geographies. However, when measuring deserts, because a tract’s respective radius can expand outside the bounds of its own tract, counts of branches are inclusive of any geography that falls within that radius, i.e., branches in surrounding states are included for deserts on state borders.

### Definitions of Terms

#### Metro Status

All tracts were classified into three areas: “Urban areas” refer to census tracts located within a metropolitan statistical area (MSA) whose population lies primarily within a principal city<sup>21</sup> of its MSA, “suburban areas” refer to census tracts located within an MSA whose population lies primarily outside of the principal cities of its MSA, and “rural areas” refer to census tracts that do not fall entirely within an MSA.

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<sup>20</sup> We choose to exclude in-store branches since they often do not offer all the full services available at traditional non-in-store bank branches. We did, however, repeat the analysis including in-store branches and found similar banking desert results for 2019 and 2022. Only one suburban, MUI, majority-White tract was no longer considered a desert in 2019 when in-store branches were included.

<sup>21</sup> Principal cities are detailed by the U.S. Office of Management and Budget in “2010 Standards for Delineating Metropolitan and Micropolitan Statistical Areas.” The full list is available at [www2.census.gov/programs-surveys/metro-micro/geographies/reference-files/2009/historical-delineation-files/list2.txt](http://www2.census.gov/programs-surveys/metro-micro/geographies/reference-files/2009/historical-delineation-files/list2.txt).



## APPENDIX A: Data Cleaning Decisions and Terminology Definitions

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### 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, consistent with the definition of areas with very low branch access in the Interagency Notice of Proposed Rulemaking to Implement the CRA (Interagency CRA NPR).<sup>22</sup>

### Potential Banking Deserts

Potential banking deserts are defined as census tracts in which there is only one branch within the fixed distance of the census tract as defined for banking deserts, consistent with the definition of areas with low branch access in the Interagency CRA NPR.

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<sup>22</sup> See [www.federalreserve.gov/consumerscommunities/files/cra-npr-fr-notice-20220505.pdf](http://www.federalreserve.gov/consumerscommunities/files/cra-npr-fr-notice-20220505.pdf) for the full text.

## APPENDIX B: Alternative Measure of Banking Deserts

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We replicated our analysis using an alternative measure of banking deserts, in which the geographical unit is the county subdivision. County subdivisions are made up of two major types of geographies: minor civil divisions (MCDs) and census county divisions (CCDs). MCDs are primary subcounty governmental or administrative units (e.g., towns or townships), while CCDs are statistical entities established by the Census Bureau and officials of state and local governments. In Pennsylvania and New Jersey, county subdivisions are primarily incorporated places (boroughs, cities, or towns; 57 percent) and townships (43 percent). In Delaware, all county subdivisions are CCDs.

Metropolitan status is assigned to subdivisions in the following way: If more than 50 percent of a subdivision's area falls within an MSA and more than 50 percent of its population lies within a principal city, it is urban; if a subdivision is more than 50 percent within an MSA but less than 50 percent of its population lies within a principal city, it is suburban; if less than 50 percent of a subdivision's area falls within an MSA, it is rural.

Even with increased branch closures during the pandemic, the number of county subdivisions that have no bank branches decreased slightly. Twenty-four county subdivisions had no bank branches in 2019, and this decreased to 21 by 2022. However, the number of lower-income subdivisions without branches (the bottom two quartiles for subdivision median household income) increased from nine to 10, the number of non-White subdivisions (those in which the majority race and ethnicity is non-White or Hispanic) increased from zero to two, and rural subdivisions with no branches increased from four to seven. A total of nearly 81,000 residents of Third District states live in subdivisions without bank branches. Overall, when measuring banking deserts by county subdivisions instead of tracts, we find that during the pandemic, the number of lower-income, non-White, or rural subdivisions without branches increased slightly.



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