

Do Bank Mergers Create “Banking Deserts”? The Evidence Indicates No.

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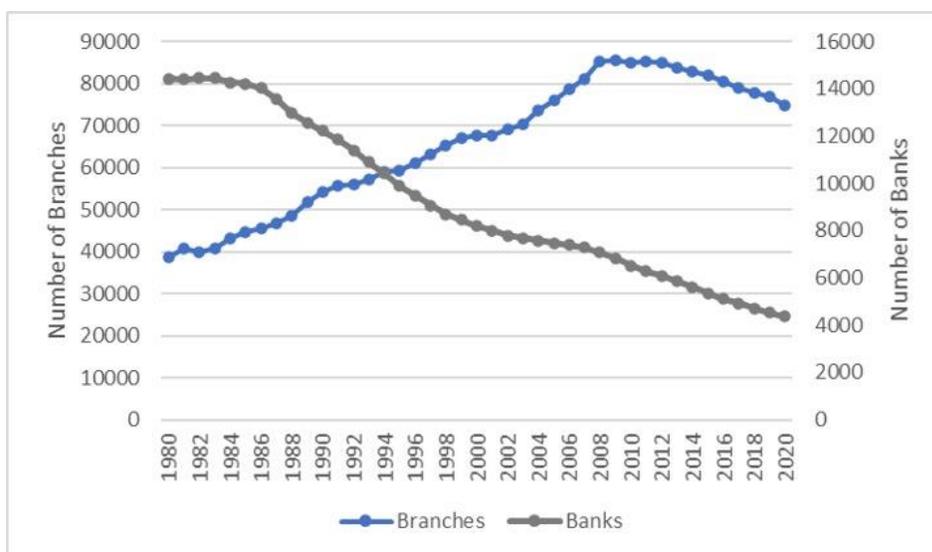
INTRODUCTION

Do bank mergers lead to a disproportionate number of branch closures and, in turn, expansion of so-called “banking deserts,” as some have claimed? An objective examination of the facts demonstrates such claims to be false and, moreover, that branch closings in recent years have not caused consumers to be unbanked.¹

Fact number 1: Historically, mergers have not been broadly associated with branch closings.

Figure 1 shows the annual count of U.S. commercial banks and total number of bank branches of these banks annually from 1980 through 2020 (as of year-end), based on [FDIC Summary of Deposits data](#). Through 2012, despite ongoing industry consolidation via numerous mergers and acquisitions, the number of branches increased continually (except for slight pauses during recessions). The number of banks decreased by more than half over this period, from 14,434 to 6,087. Yet, *as this consolidation proceeded, the number of bank branches more than doubled, from 38,738 to 84,898*. Much of this period was characterized by geographic expansion of banking institutions once restrictions on interstate banking were lifted, accomplished both by acquiring other banks and by establishing new branches.

Figure 1: Annual counts of banks and bank branches by year (1980-2020)



¹ This note is intended to demonstrate that mergers do not contribute to financial exclusion. It is not intended to address how regulators should weigh the potential for branch closures as part of the convenience-and-needs assessment of a proposed transaction.

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Fact number 2: In recent years branch closures have occurred about as frequently among banks involved in merger activity as among those that were not.²

The number of bank branches has declined materially since 2012 both for banks that merged with or acquired other banks and for those that did not. This is best demonstrated by focusing on the 48 banks that had at least 150 branches as of June 2012, as branch closings during this period were concentrated within this cohort.

Quantifying the change in number of branches of banks in this cohort requires *merger-adjustment*, whereby a bank's 2012 branch count incorporates the 2012 branches of all institutions subsequently acquired.³ Overall, based on merger-adjusted count, these banks had a net decline of 10,104 branches between June 2012 and June 2020.⁴ Half of this net decline occurred at 17 banks that had no merger activity, and half occurred at the remaining 31 banks involved in at least one merger or acquisition.⁵ (Merger adjustment is required because otherwise, a bank's branch count would increase following a merger, spuriously suggesting that mergers lead to branch creation.)

Figure 2 shows the percentage contribution of each of these banks to the total net decline in *merger-adjusted* branch count of all of them combined, with the institutions rank-ordered by this share.⁶ Banks that engaged in a merger or acquisition during June 2012 through June 2020 are represented by blue bars and those that did not by orange bars.⁷

Clearly, banks that had no merger or acquisition were some of the largest contributors to the overall net decline (notably, three of the top five and six of the top 10 in Figure 2). Despite being fewer in number, banks not involved in mergers tended to be larger and had a similar proclivity to close branches compared to banks that engaged in merger activity.⁸

² According to the FDIC there were 74,583 bank branches in the U.S. as of year-end 2020.

³ Thus, for example, if Bank A acquired Bank B in 2015, the number of branches indicated for Bank A in 2012 would count both Bank A's and Bank B's branches.

⁴ Between June 2012 and June 2020, there was a net decline of about 9,600 bank branches; thus, the institutions excluded by this criterion had a combined net increase of about 500 branches.

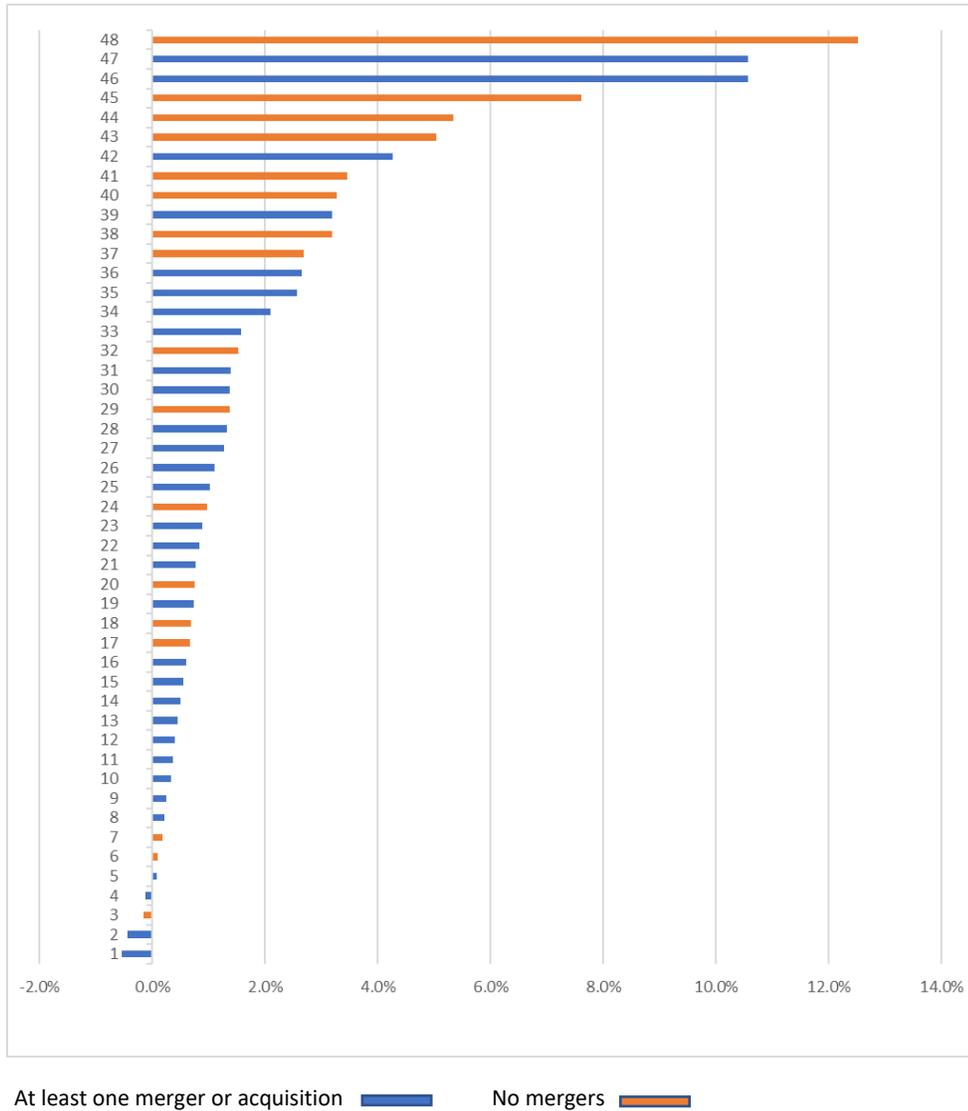
⁵ As of June 2012, the cohort without a merger or acquisition had 29,840 branches, while the cohort with at least one merger or acquisition had a merger-adjusted count of 21,260. The banks without a merger or acquisition had 24,868 branches as of June 2020, a net decline of 4,972, while the banks involved in merger activity had 16,128 as of June 2020, a net decline of 5,132.

⁶ Number of full-service branches by institution and year is obtained from the FDIC's Summary of Deposits database.

⁷ Merger transactions that occur between 2011 and 2012 are taken into consideration to allow for a lagged effect on decisions to close branches. A merger between affiliated banks or an acquisition of an internet bank without retail branches is not classified as a merger or acquisition for the purpose of this analysis. Information on mergers and acquisitions is obtained from the [FFIEC National Information Center](#).

⁸ The banks that did not participate in a merger or acquisition averaged about 1,400 branches per institution as of June 2012, while those that subsequently acquired at least one other institution averaged 470 branches per institution as of June 2012. Percentage decline in branch count varies widely across individual banks in each cohort. Statistical testing indicates no statistically significant difference between the two cohorts in either mean or median percentage decline.

Figure 2: Individual, percentage contributions of the 48 banks to the combined net loss of branches



A bank’s decision to close a branch, whether in the context of a merger or not, is based on an assessment of cost versus benefit. A bank will weigh the expense of operating the branch against the long-run value, broadly assessed, of retaining the branch. Branches can have value for growing or preserving an institution’s market share, maintaining customer satisfaction, and meeting community and regulatory expectations around CRA compliance.

Often, banks close branches that have become underutilized. Thus, as detailed below, branch closures often are due to increased customer reliance on digital banking or to migration out of the neighborhoods or communities those branches served.

Specifically in the case of a merger, the acquirer seeks to realize efficiencies from the transaction, and sometimes this motivates branches being closed. Often in such instances, the closed branches became redundant due to overlapping service areas of the combining institutions.

In sum, decisions to close branches are not arbitrary, nor are they an automatic consequence of mergers. Many factors cause banks to close branches, including efficiency considerations tied to mergers, but the ongoing, national downward trend in number of bank branches is not driven by mergers.

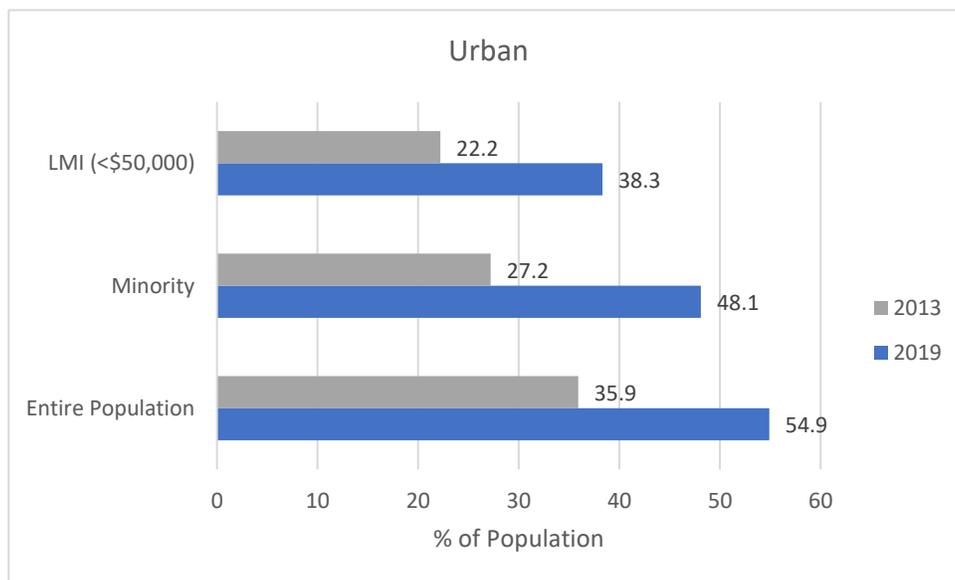
Fact number 3: Branch closings since 2012 likely reflect the growth of digital banking, which has reduced the demand for brick-and-mortar branches.

Survey evidence suggests that consumers affected by branch closings in recent years have had access to convenient alternatives, such as other nearby branches or online banking. According to the 2019 FDIC [Survey of Household Use of Financial Services](#), just 2.2 percent of unbanked households in 2019 cited inconvenient bank locations as their main reason for being unbanked.⁹

Based on the FDIC survey data, among households with a bank account, use of online or mobile banking services increased substantially between 2013 and 2019, as shown in Figure 3.¹⁰ The share of households that use online or mobile banking as the “most common way” of accessing their account increased from 35.9 to 54.9 percent for urban households and from 26.1 to 40.4 percent for rural households.

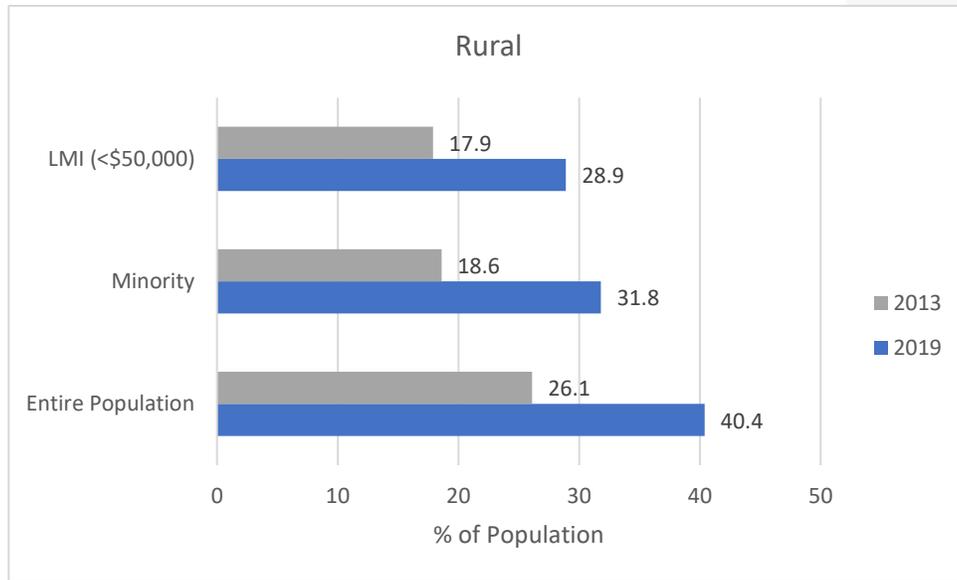
Such evidence underscores the role of online banking in reducing consumer dependence on bank branches. Thus, branch closures in recent years can be seen as a natural accompaniment to growth of online banking.

Figure 3: Households that Use Mobile or Online Banking as their Most Common Way to Access their Accounts – 2013 versus 2019



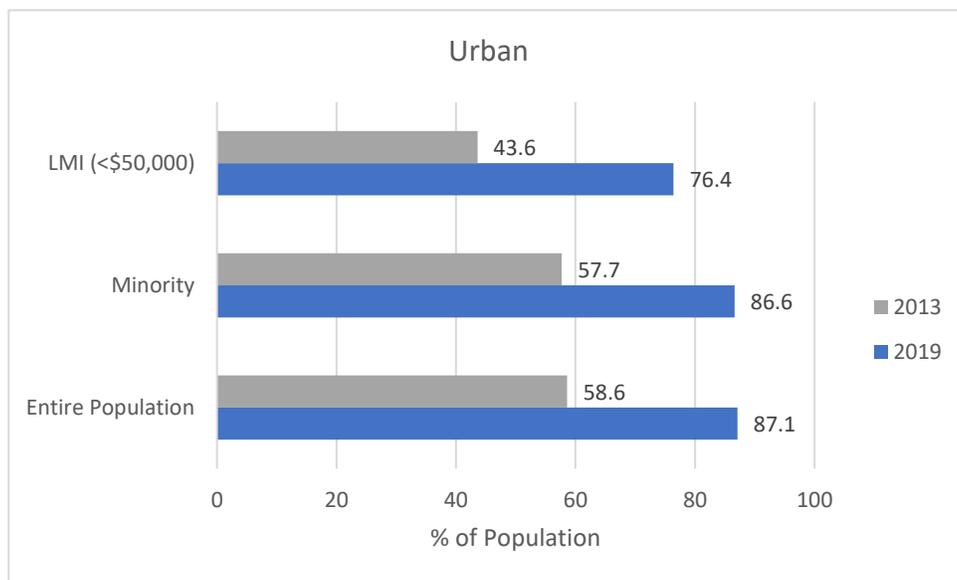
⁹ This survey response is consistent with analysis in [Dante and Makridis \(2021\)](#), which demonstrates greater use of mobile banking in areas with fewer bank branches.

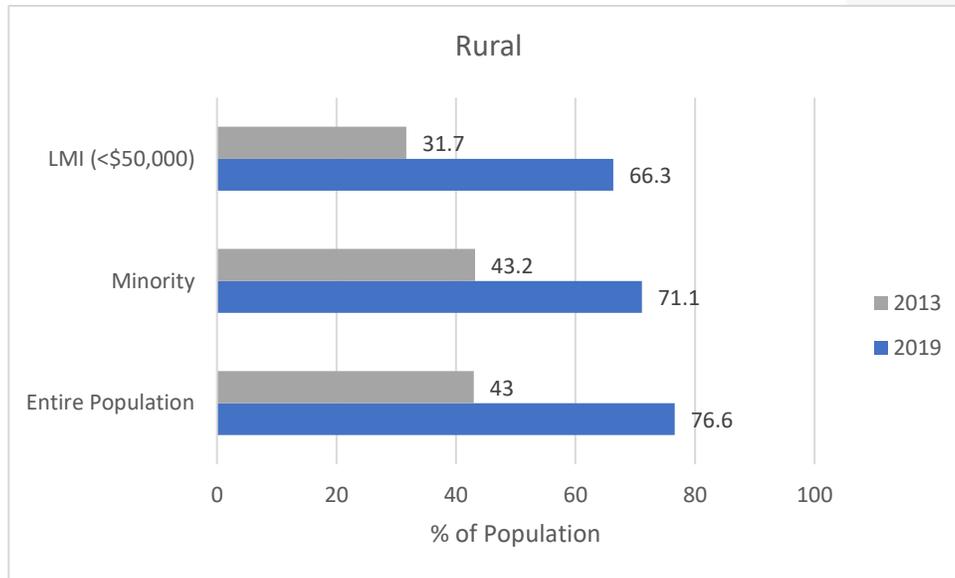
¹⁰ Similarly, [Merry \(2018\)](#) documents growth in mobile banking during 2011 through 2017.



Increased adoption of smartphones likely contributed to the increased use of mobile banking. As shown in Figure 4, the share of households with access to a smartphone increased by 28.5 percentage points in urban areas and 33.6 percentage points in rural areas between 2013 and 2019. Increased adoption by lower-income households and minority households was comparable to that of the overall population.

Figure 4: Households with Smartphones – 2013 versus 2019





Fact number 4: Banks’ decisions to close branches also are influenced by local population gain or loss, which affects branch utilization.

Table 1 shows the percentage change in the number of branches in relation to the change in population growth rate, broken out in quintiles from the lowest population growth (actually, a loss) to the highest. The chart also shows the result for both urban and rural counties.¹¹ Each rural and urban quintile exhibits a net decline in number of bank branches, reflecting the closings that have occurred since 2012, both among banks that merged with or acquired other banks and those that have not.

Consistent with the notion that utilization of bank branches is driven by population changes, the table generally shows larger percentage declines in the number of branches for areas with population decline or smaller population growth rates. For instance, the bottom quintile of urban counties (population decline of 1.93 percent or more) as a group lost 16 percent of their branches, while the top (growth rate of 7.54 percent or more) lost 7.9 percent.

The one exception to this inverse relationship is the bottom quintile of rural counties. Despite significant loss of population in these areas, they experienced relatively modest declines in the number of bank branches, perhaps reflecting greater reliance on the services provided in brick-and-mortar branches, less adoption of mobile banking or reduced internet availability in these more isolated locations.

¹¹ U.S. Department of Agriculture Economic Research Service rural and urban county classifications are applied here; county population data are from the American Community Survey.

Table 1: Percentage Decline in Number of Branches by Quintile of County Population Change

% Change in Population between 2013 and 2020			Number of Full-Service Branches		
Urban Counties					
Quintile	Range		2013	2020	% Change
1	-21.55	-1.93	4,692	3,940	-16.0%
2	-1.91	0.66	11,716	10,142	-13.4%
3	0.67	3.38	16,857	14,963	-11.2%
4	3.38	7.53	16,473	14,998	-9.0%
5	7.54	30.45	19,727	18,166	-7.9%
Rural Counties					
Quintile	Range		2013	2020	% Change
1	-35.81	-4.24	2,099	1,981	-5.6%
2	-4.24	-2.4	3,231	2,924	-9.5%
3	-2.39	-0.79	3,189	2,922	-8.4%
4	-0.79	1.55	3,544	3,302	-6.8%
5	1.58	80.75	3,636	3,451	-5.1%

Fact number 5: Banking industry consolidation since 2012 on average has not harmed, and arguably may have enhanced, consumers’ access to bank branches.

A recent report from the Federal Reserve Bank of Cleveland ([Fee and Kiersten-Nyman 2021](#)) documents little change in bank branch accessibility over the past two decades. The report assesses accessibility on three dimensions: number of branches per banking institution, number of branches per 10,000 people, and average distance to the nearest branch as measured from Census tract centroid locations. Table 2 applies the latter two calculations to the FDIC’s 2013 and 2020 Summary of Deposits data, , again distinguishing between rural and urban counties.

Between June 2013 and June 2020, the number of banking institutions declined by 24.4 percent while the total number of branches decreased by 9.8 percent. As a result, the number of branches per institution increased: from 16 full-service branches per institution in 2013 to 19 in 2020.

Within urban areas, the average distance of a household to the nearest bank branch held stable at 1.5 miles, identical to what it was in 2000. Within rural areas, the average distance to the nearest branch *decreased* from 4.4 to 4.3 miles, consistent with the findings from the Federal Reserve Bank of Cleveland study.¹² As that study

¹² Again, U.S. Department of Agriculture Economic Research Service rural and urban county classifications are applied.

concludes, consolidation “provides consumers access to larger networks of branches and has caused no significant change in a customer’s physical proximity to branches on average.”¹³

Table 2: Branch Accessibility – 2013 versus 2020

Year	Branches Per 10,000 People		Average Distance to Nearest Branch	
	Urban	Rural	Urban	Rural
Jun-20	2.2	3.2	1.5	4.4
Jun-13	2.5	3.4	1.5	4.5

Fact number 6: “Banking deserts” (which may arise from branch closures) are not associated with a significant increase in the unbanked share of the population.

Between June 2013 and June 2020, the share of the U.S. population that resides in a “banking desert” – a location characterized by the absence of conveniently located bank branches (see the Appendix for a formal definition) – rose from 5.6 to 6.3 percent, reflecting the decline in the number of bank branches.¹⁴ As noted above, branch closures are equally likely at banks that had been involved in mergers and ones that had not.

In any event, evidence suggests that the growth of banking deserts has not harmed financial inclusion. As noted previously, just 2.2 percent of unbanked households in 2019 cited inconvenient bank locations as their main reason for being unbanked. In addition, [analysis](#) from the Federal Reserve Bank of New York (based on data from the 2015 FDIC Survey of Household Use of Financial Services) indicates that across states, the share of the population that is unbanked is not positively correlated with the share residing in banking deserts.

In fact, even as the share of the U.S. population that resides in a banking “desert” increased slightly, the share of households that are unbanked in fact decreased. As shown in Figure 5 (based on data from the 2013 and, respectively, 2019 FDIC Survey of Household Use of Financial Services), financial inclusion improved in both urban and rural areas, for lower-income and minority as well as other households, between 2013 and 2019. The percent of the population that is unbanked declined from 7.7 to 5.3 percent in [Core Based Statistical Areas](#) (CBSAs) and from 6.9 to 5.9 percent outside of CBSAs. The gains have been especially pronounced among minority households.¹⁵

Moreover, contrary to the view that branch closures in recent years have harmed financial inclusion, areas where branching “deserts” have experienced a relatively large improvement in financial inclusion (reduction in the percentage of the population that was unbanked). This is evident from a comparison of financial inclusion rates

¹³ Relatedly, a recent [Federal Reserve analysis](#) of branch closings during the COVID-19 crisis finds that these were concentrated in metropolitan areas, with little difference between low-to-moderate-income and middle-to-upper-income neighborhoods. Most of the closures were of branches located in proximity to another bank branch.

¹⁴ BPI staff quantified the size of banking deserts using the FDIC Summary of Deposit data merged with population data from the American Community Survey, applying the delineation of banking desert areas described in the Appendix. This analysis indicates that the percent of the population that resides in a banking desert increased from 1.5 to 1.8 percent in urban census tracts; from 9.1 to 10.7 percent in rural tracts; and from 11 to 12.1 percent in mixed tracts.

¹⁵ Among minority households, the percent of unbanked households declined by 5.6 percentage points inside of CBSAs and 3.2 percentage points outside of CBSAs. Similar patterns are observed if financial exclusion is measured as a percent of households underbanked, with a household defined as underbanked if it has utilized alternative providers of transactions services; specifically, check-cashing or money orders.

across geographic units ranked by degree of banking desert expansion (change in the share of the population residing in a banking desert).

Figure 5: Percent of the Population That Is Unbanked – 2013 versus 2019

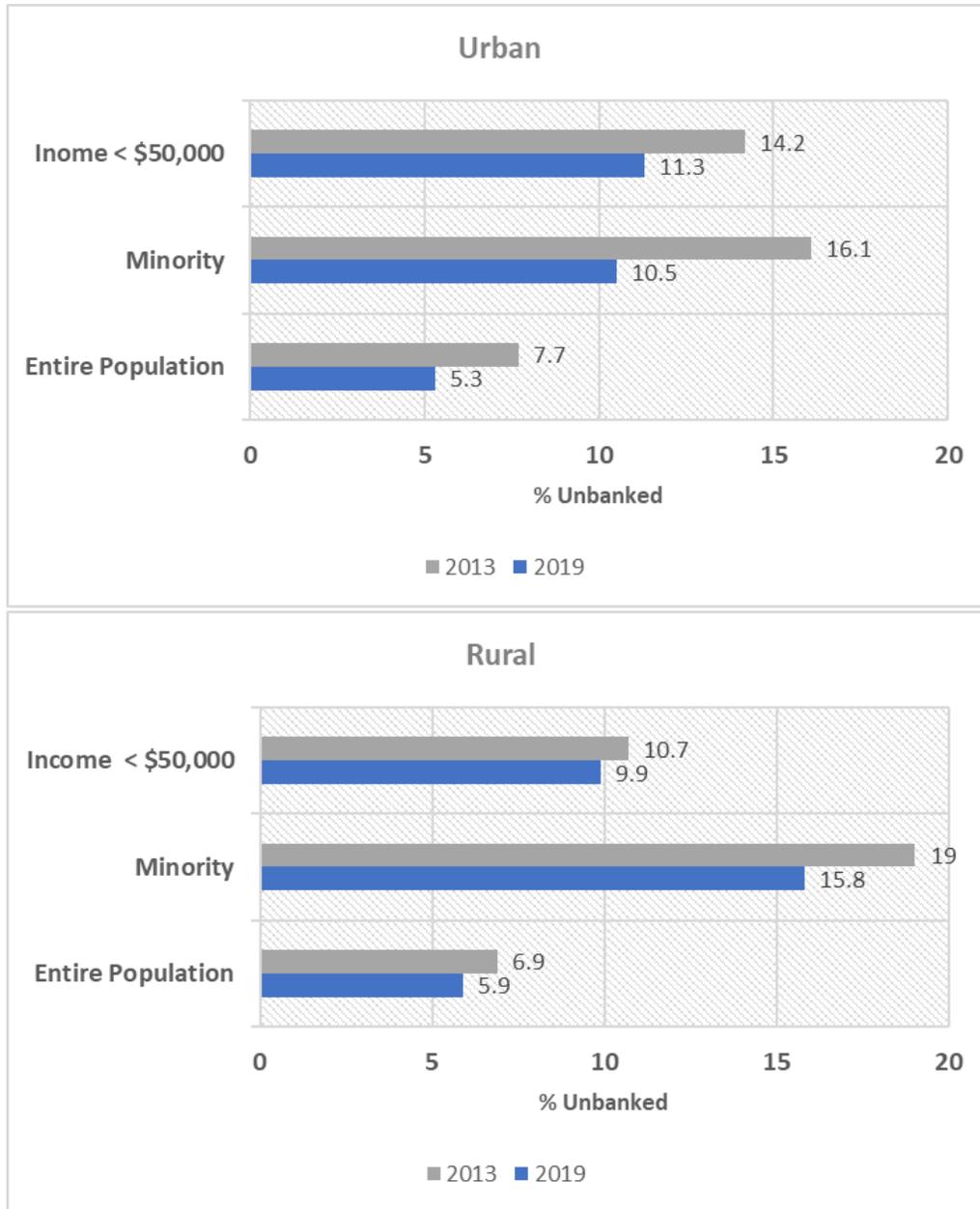
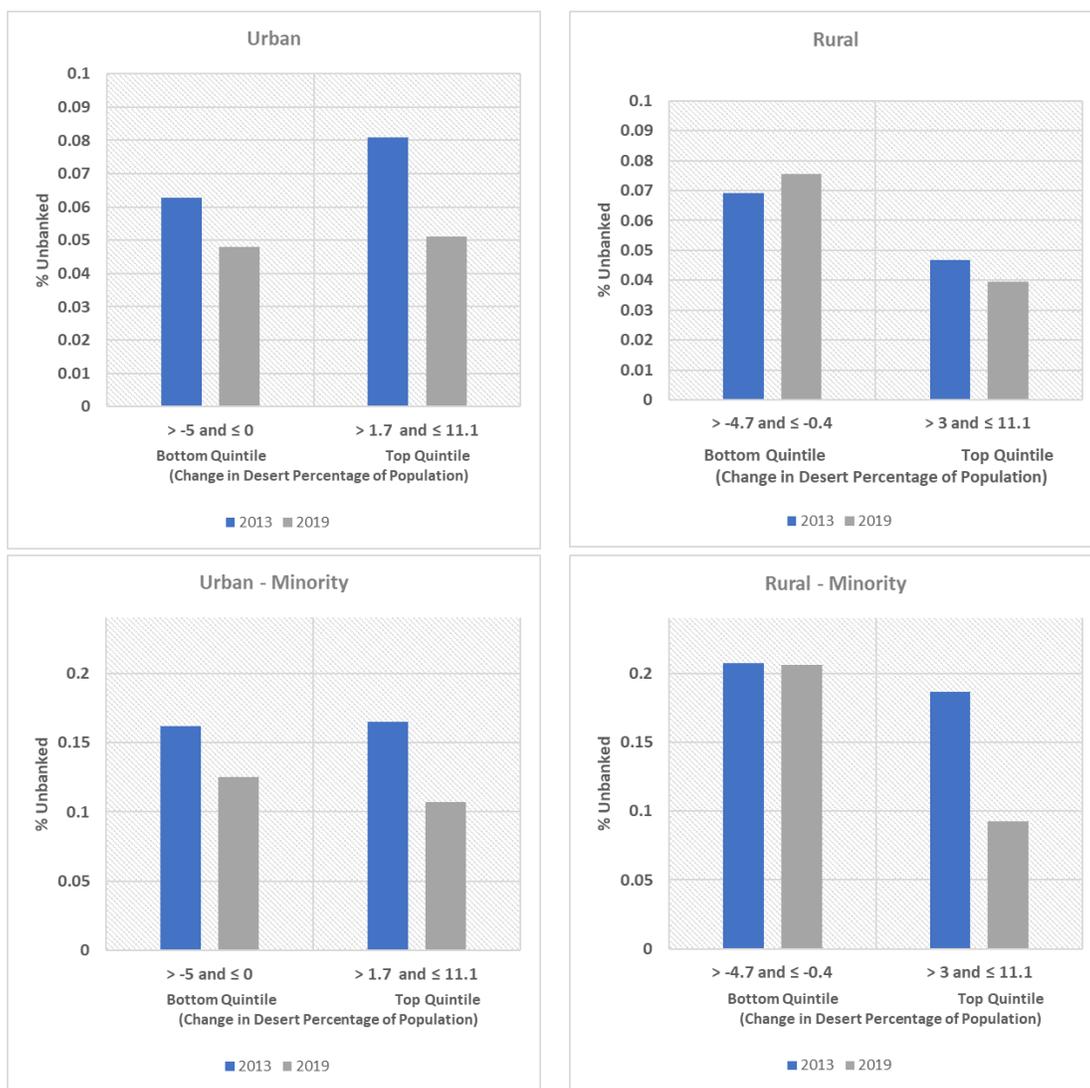


Figure 6 presents such a comparison, for urban areas (CBSAs) and, separately, rural (non-CBSA) portions of states as the geographic units of analysis. Financial inclusion gains, overall and for minority households, are compared between the top and bottom quintiles of banking desert expansion across these areas. For both rural and urban areas, the bottom quintiles are characterized by a decline in share of the population that resides in a banking

desert. The top quintile of urban areas is characterized by a 1.7 percentage point or larger increase in share of the population that resides in a banking desert, while the top quintile of rural areas is characterized by an increase of 3 percentage points or more.

Notably, larger reductions in the percent unbanked – in other words, larger increases in the percent becoming “banked” -- are indicated for the top quintile of banking desert expansion, across both urban and rural areas. The largest improvement in financial inclusion is observed for the minority population in the top quintile of rural areas.¹⁶ A plausible explanation for the patterns observed in Figure 6 is that expanded digital access to banking services is a primary factor underlying both branch closings and declining number of consumers that are unbanked.

Figure 6: Financial Inclusion Gains: Bottom versus Top Quintiles of Branching Desert Expansion



¹⁶ Thus, the data are inconsistent with the claim in the White House “Fact Sheet” on promoting competition in banking markets that branch closings tied to bank mergers disproportionately harm rural communities of color.

CONCLUSION

Forty years of evidence demonstrates that mergers do not lead to a disproportionate number of branch closings and do not cause consumers to be unbanked. Between 1980 and 2012, despite ongoing industry consolidation via numerous mergers and acquisitions, the number of bank branches in the United States more than doubled. Although the number of bank branches began declining after 2012, this industrywide trend was not fundamentally driven by merger activity.

Branch closings since 2012 reflect consumer adoption of digital banking, which has reduced the need for brick-and-mortar branches. It has also been influenced by local population gain or loss, which generally affects the degree to which branches are utilized.

On average, consumers' distance to the nearest bank branch has been unaffected by these branch closings. Perhaps most importantly, branch closings and the increase of "banking deserts" do not appear to materially affect the unbanked share of the population.

Thus, there is no evidence to support an assertion that bank mergers cause consumers to be unbanked.

Appendix: Delineation of “Banking Desert” Areas

The raw 2013 and 2020 Summary of Deposits data are first filtered to include only full-service brick and mortar or retail offices of national banks, state member banks, state nonmember banks, credit unions and state and federally chartered saving banks and savings and loan institutions. Next, for each of these years, census tracts containing no bank branches are identified. These are then designated to be banking deserts if nearby tracts likewise contain no branches, in accordance with the following three-part rule:¹⁷

1. A census tract within an urban area as defined by the U.S. Census is a banking desert if that tract and each neighboring tract within 2 miles (based on distance between centroids) also lacks a bank branch
2. A census tract within a rural area as defined by the U.S. Census is a banking desert if that tract and each neighboring tract within 10 miles also lacks a bank branch
3. A mixed census tract (partly within an urban area) is a banking desert if that tract and each neighboring tract within 5 miles also lacks a bank branch
4. The classification of census tracts as rural, urban, or mixed are based on the 2010 Census and are available from the FFIEC Census [data repository](#).

The next step is to aggregate the desert and non-desert tract-level populations into desert and non-desert populations of urban areas (Core-Based Statistical Areas) and rural (non-CBSA portions of states) and at the national level for each year. The [HUD USPS Zip Code Crosswalk Files](#) are used to aggregate census tract populations first to the ZIP code level (using the Tract to Zip Crosswalk) and then to the CBSA level (using the Zip to CBSA Crosswalk).¹⁸

¹⁷ The classification of census tracts as rural, urban, or mixed are based on the 2010 Census and are available from the FFIEC Census [data repository](#).

¹⁸ A small number of desert tracts are not matched in the crosswalk file because, per the HUD crosswalk files webpage, "HUD is unable to geocode a small number of records that we receive from the USPS. As a result, there may be some 5-digit USPS ZIP codes that will not be included in these crosswalk files. Less than 1% of the total number of active 5-digit ZIP codes in the country are excluded from the current version of the crosswalk files."