



What Drives Household Financial Inclusion? Analysis of Data Exposes Myths and Identifies Opportunities

Paul Calem and Yasmeen Abdul-Razeq | May 3, 2022

Banking mergers and acquisitions often are associated with the goal of enhancing the efficiency of the combined organization. One important benefit is scale economies that result from spreading corporate overhead such as information technology over a larger revenue or asset base. However, achieving such benefits may involve closing some brick-and-mortar branches in overlapping markets of the merged entities, leading to concerns about reduced access to banking services in affected neighborhoods (although branch closings are [unrelated to mergers as often as they are related.](#))¹ Similarly, large banks acquiring small banks are sometimes viewed unfavorably, in that small banks are thought to have greater knowledge and expertise about the local markets they serve.

But are the data consistent with assertions that branch closures, including those associated with mergers, harm household financial inclusion? Are financially vulnerable households indeed more susceptible to becoming unbanked in areas where banks have been closing branches, or in areas with a declining number of smaller banks?

In a new BPI [research note](#), using a robust FDIC data set, we answer these questions by studying why some places saw greater improvement in financial inclusion between 2013 and 2019 than others.² We explore a range of factors potentially associated with differing financial inclusion outcomes across geographic areas, and assess whether a change in the number of bank branches or a change in the mix of large versus small banks in an area played a role.

The analysis indicates that neither a reduction in bank branches nor an increase in the proportion of branches owned by large banks over this period has a material effect on household financial inclusion. Rather, material drivers are mobile access (through use of smartphones) and the percentage of financially disadvantaged households in the area.

UNBANKED HOUSEHOLDS, A MEASURE OF FINANCIAL INCLUSION

Every other year, beginning in 2009, the FDIC Survey of Household Use of Banking and Financial Services estimates the percentage of U.S. households that are unbanked, defined as no one in the household having a checking or savings account at a bank or a credit union. Based on these data, the percentage of unbanked households in the U.S. increased from 7.6 to 8.2 percent between 2009 and 2011, likely because of financial setbacks from the recession that ended in 2009. It fell to 7.7 percent in 2013 and then continued to decline steadily, to 5.4 percent as of 2019.³

¹ See, e.g., Jad Edlebi, Bruce C. Mitchell, and Jason Richardson, "The Great Consolidation of Banks and Acceleration of Branch Closures Across America," [National Community Reinvestment Coalition](#), February 2022.

² The analysis relies primarily on data from the FDIC [Survey of Household Use of Financial Services](#) merged with data on the structure of local banking markets from the FDIC Summary of Deposits database.

³ See [FDIC 2019 SurveyReport-book](#), page 1.

The estimated percentage of unbanked households based on the survey varies substantially across geographic areas. For instance, a quarter of metropolitan areas in our 2019 sample had an unbanked percentage below 1.6, and another quarter had an unbanked percentage exceeding 7.1 percent.

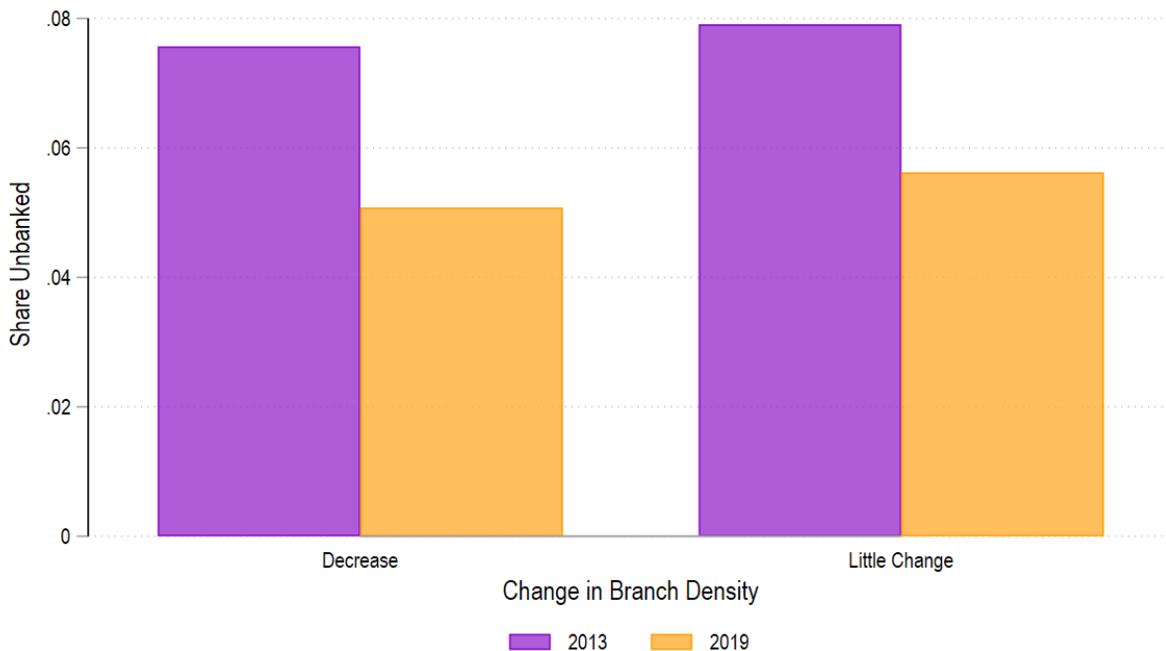
DECLINING BRANCH ACCESSIBILITY IS NOT ASSOCIATED WITH WORSENING FINANCIAL INCLUSION

A simple approach to analyzing the change in household financial inclusion is to compare the change in percentage of unbanked households between two recent distinct periods across categories of geographic areas. Our analysis focuses on the change in the proportion of households that were unbanked between 2013 and 2019, to separate it from the immediate effects of the economic recession that ended in 2009.

Using this approach, a previous BPI research note demonstrated that the increasing number of [banking deserts](#)—locations characterized by absence of conveniently located bank branches—has not been associated with an increased percentage of unbanked households. Here, we focus on two alternative measures of bank branch coverage in a geographic area. The first, branch density, is simply the number of branches per 10,000 residents in a geographic area. The other measure is the average distance to the nearest branch.

Branch density. In Figure 1, we slot metropolitan areas into two groups based on change in branch density: areas with a decrease in branch density between 2013 and 2019 and those with little change. There are too few metropolitan areas with an increase in branch density to include those as another comparison group. Also, nearly all rural areas fall into the category of little change in branch density, ruling out a comparison across rural areas.

Figure 1: Change in Financial Inclusion by Range of Change in Branch Density (Urban areas)



The chart shows that there is no evidence that declining branch density is associated with worse financial inclusion outcomes. Areas with a decrease in branch density and those with little change in density experienced similar

declines in the proportion of households that are unbanked (2.5 and 2.3 percentage points, respectively), where the difference is not statistically significant.

Average distance to the nearest branch. A similar analysis slots urban and rural areas, respectively, into two groups based on change in average distance to the nearest bank branch: those with an increase in average distance to the nearest branch and those with little change. Note that there are too few metropolitan or rural areas with a decrease in average distance to include those as another comparison group.

Most urban and most rural areas had little change in average distance to the nearest branch.⁴ The proportion of unbanked households declined from 7.8 percent to 5.2 percent for the urban cohort and from 6.9 to 5.8 percent for the rural cohort of areas characterized by little change in average distance.

For the relatively few areas that had a material increase in average distance to the nearest branch, the proportion of households that are unbanked changed little between 2013 and 2019, and it was already systematically lower compared to other areas as of 2013. The proportion of unbanked households increased from 5.3 to 5.7 percent for the urban cohort and from 5.2 to 5.3 percent for the rural cohort of areas characterized by material increase in average distance, with neither of these increases being statistically significant.

DECLINING SMALL BANK SHARE IS NOT ASSOCIATED WITH WORSENING FINANCIAL INCLUSION

Next, we consider whether the relative proportion of small banks to large banks in an area affects financial inclusion. We focus on the share of an area's bank branches belonging to banking institutions with less than 10 billion dollars in total deposits. Figure 2 presents results from this categorization.⁵

Again, we see no indication that a decline in small bank share is associated with worse financial inclusion outcomes. Areas where the share of small banks saw little change had similar reductions in their percentage of unbanked households as areas with a decline in small bank share (2.2 and 2.5 percentage points, respectively, with the difference not statistically significant.)

A relatively small number of metropolitan areas experienced an increase in small bank share.⁶ These areas had a relatively large decline in the proportion of unbanked households (3.8 percentage points). Notably, the increase in small bank share was almost entirely a consequence of closing of branches by large banks.⁷ Thus, the comparatively large decline in proportion of households for this cohort is, in fact, inconsistent with the notion that branch closings by large banks harm financial inclusion.

⁴ There are 32 urban areas and 8 rural areas in our sample with a material increase in average distance to the nearest branch, compared to 219 urban areas and 37 rural areas with no material change.

⁵ In the case of rural areas, there is insufficient change in small bank shares to allow for meaningful comparisons.

⁶ There are 22 urban areas in our sample with an increase in small bank share, compared to 119 with little change and 122 with a decrease.

⁷ The cohort of CBSAs with an increase in small bank share had 2,016 branches belonging to large banks and 2,439 branches belonging to small banks in 2013. The number of branches of large banks declined to 1,493 while the number of branches of small banks remained roughly the same at 2,470 in 2019.

Figure 2: Change in Financial Inclusion by Range of Change in Small Bank Share



REGRESSION ANALYSIS SHOWS LACK OF ASSOCIATION BETWEEN CHANGES IN FINANCIAL INCLUSION AND MEASURES OF BRANCH ACCESSIBILITY AND SMALL BANK SHARE

The new research note further analyzes whether any change in the proportion of the population that is unbanked is affected by branch accessibility and small bank density. The regressions include factors that may have materially promoted or impeded improvement in household financial inclusion between 2013 and 2019. Regression equations are estimated across urban areas, relating the change in unbanked share of area population between 2013 and 2019 to static and dynamic characteristics of the area.⁸

Dynamic area characteristics—those that evolved substantially between 2013 and 2019, such as the proportion of households with a smartphone -- may directly affect households’ access to or benefit from having a bank account. Relatively static characteristics, such as the demographic composition of a metropolitan area, are also considered because they may affect how the unbanked population in an area responds to changing economic conditions or to outreach efforts by banks.

The analysis indicates that decreases in the percentage of unbanked people between 2013 and 2019 were greatest in metropolitan areas where a comparatively large share of survey respondents lacked a high school diploma, an indicator for being financially disadvantaged. In addition, the analysis suggests that financial inclusion gains are tied to income growth.

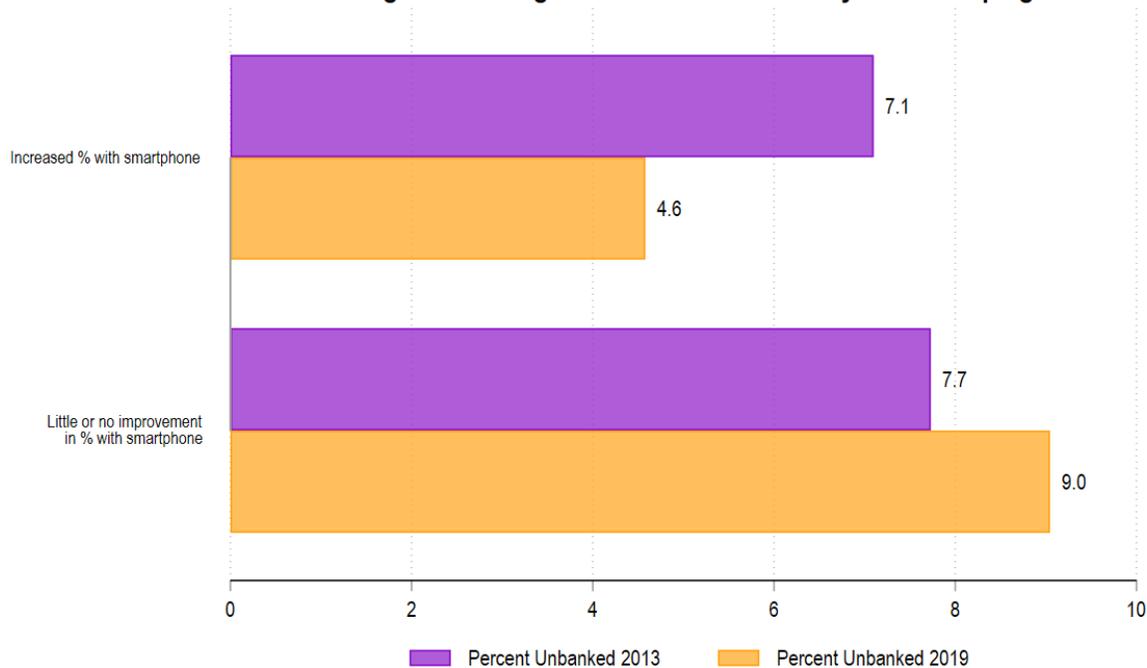
⁸ The sample for this analysis consists of the 180 metropolitan areas that have at least 20 household observations in both years. No micropolitan areas or rural areas satisfy this minimum sample size criterion.

Digital inclusion—defined as the share of households with a smartphone—also appears to play an important role. Areas with substantial improvement in digital inclusion had significant gains in financial inclusion, consistent with the increasing importance of mobile banking to households.⁹

However, change in branch accessibility or in the mix of large versus small banks exhibits no important relation to change in the proportion of households that are unbanked, as indicated by lack of explanatory power in the estimated equations.

In Figure 3, we group metropolitan areas between those with little or no improvement in digital inclusion (less than 8 percentage point increase in share of households without a smartphone) and those with material improvement.¹⁰ The group of metropolitan areas with little or no improvement in digital inclusion exhibits an increase in percent unbanked; that is, worsening financial inclusion, in clear contrast to the substantial reduction in percent unbanked for the comparison group. Moreover, both groups had similar improvement in economic conditions between 2013 and 2019, so that digital inclusion rather than the local economy appears to be the more relevant factor.¹¹

Figure 3: Change in Financial Inclusion by Area Grouping



⁹ According to the FDIC survey data, just 9.5 percent of banked households in 2015 reported that mobile banking was the primary method of accessing their accounts, ranking fourth behind online banking, bank teller, and ATM. In 2019, mobile banking was the top ranked method, with 34 percent indicating it to be their primary method. See [FDIC 2019 SurveyReport-book](#), p. 4.

¹⁰ The 10 percent threshold approximates the median value of this variable in the 2013 sample.

¹¹ Based on the FDIC survey sample, the group with little or no improvement in smartphone ownership experienced a drop in unemployment percentage from 6.9 to 4.2, versus 6.4 to 3.6 for the comparison group of metropolitan areas.

HOUSEHOLD FINANCIAL INCLUSION HAS BECOME MORE TIED TO DIGITAL INCLUSION

The research note additionally explores factors associated with differences in financial inclusion across metropolitan areas within a given year, as distinguished from the previous examination of change between 2013 and 2019. Specifically, we estimate cross-sectional regression equations relating the unbanked share of households living in metropolitan areas to area characteristics separately for 2013 and 2019.¹²

The estimation results suggest that household financial inclusion has become more strongly tied to digital inclusion in more recent years, likely due to the expanding role of mobile banking. In 2019, the proportion of households that were unbanked was larger in urban areas where a larger proportion of households lacked a smartphone, and this relationship is statistically significant. In 2013, however, the relationship between percent unbanked and percent without a smartphone, while positive, is weaker and not statistically significant.

We also find that across metropolitan areas, the percent unbanked increases with the percent that lack a high-school diploma or that are low income (under \$50,000), and with the proportion of the population that is Black, Native American, or foreign-born non-citizen. It exhibits little association, however, with the measures of bank branch accessibility or with the mix of large versus small banks, as indicated by lack of explanatory power in the estimated regression equations.

CONCLUDING COMMENTS

The view that bank mergers harm household financial inclusion has recently gained traction among advocates of stricter merger policies. Exploring the factors associated with variation across geographic areas in the proportion of households that are unbanked and those associated with the widespread gains in financial inclusion achieved between 2013 and 2019, we find no support for this view.

Rather, the findings suggest that improving the economic status of households with low levels of education and income, expanding digital inclusion, and strengthening outreach efforts to minority populations would be most effective at reducing the unbanked population.

Disclaimer: The views expressed do not necessarily reflect those of the Bank Policy Institute's member banks, and are not intended to be, and should not be construed as, legal advice of any kind.

¹² Metropolitan areas with fewer than 20 household observations in a single survey year are excluded from the regression sample to mitigate noise from measurements based on few observations.