

THE EFFECTS OF POPULATION CHANGE ON COMMUNITY BANK DEPOSITS AND LOANS

OVERVIEW

Over the past several decades, total U.S. population growth has been strong, but regional and county-level growth has varied widely. The county-level growth variability has had significant distributional effects, with population shifting both between regions of the country and within states, generally leading to more urban growth and rural population decline. This analysis summarizes recent population growth trends and estimates the impacts of population changes on bank deposits and loan portfolios for community banks based on data going back more than 20 years.¹ These estimates may be useful to community bankers in planning for growth and allocating resources toward supplying loans to meet new demand, as the effects of population growth vary between counties of differing population densities.

Deposits across banks at the county level grow as populations expand. Bank branches in metropolitan counties see faster deposit growth than do branches in micropolitan and rural counties, in which deposits tend to lag population changes by about a year.² Deposits in community banks in metropolitan counties tend to grow at roughly the same rate as population growth, while deposits in community banks in less-populous counties grow at a much slower rate. When population decreases, deposits still grow in community banks in metropolitan counties but decline in community banks in micropolitan and rural counties.

As with total deposits, population growth generally leads to higher loan volumes at local community banks.³ This analysis finds that the effects of population growth on loan portfolio composition also differ among metropolitan, micropolitan, and rural counties. For commercial and industrial (C&I) loans and agricultural loans, population growth is associated with greater loan concentrations in some county types but lower loan concentrations in other county types. For commercial real estate loans (CRE) and single-family residential loans, population growth positively correlates with increases in loan concentrations across all county types, but the magnitude of the effect differs between

¹Community banks are defined by asset size, business plan, geographic footprint, and number of branches. For the complete definition, see “FDIC Community Banking Study,” December 2012, <https://www.fdic.gov/resources/community-banking/report/2012/2012-cbi-study-full.pdf>.

²County types are defined by Office of Management and Budget guidelines. Metropolitan counties contain a core urban area of at least 50,000 or more in population. Micropolitan counties contain an urban core of at least 10,000 but less than 50,000 in population. All other counties are rural.

³Throughout this article, references to loans, loan volumes, and loan shares are always in terms of value.

county types. Some U.S. population growth patterns reversed during the pandemic as individuals fled densely populated cities for less-densely populated micropolitan and rural counties. These new population trends, if they persist, could significantly affect the deposits and loan portfolios of community banks, and community banks may need to adapt their business models to changing local conditions.

Long-term population trends have the potential to deeply affect community banks. Rural depopulation reduces deposit funding and can challenge bank lending in such communities. Previous FDIC studies have found that these trends extend well beyond the past two decades: more than one-third of rural counties reached their peak populations before 1930.⁴ This has led some community banks in counties with decreasing populations to focus on agricultural loans as demand for other loan types declined. In a self-reinforcing cycle, focus on agricultural loans can preclude the development of expertise in other loan types, consequently further restricting lending options for local communities. Alternatively, other banks opened branches in nearby micropolitan and metropolitan regions to diversify their loan portfolios.⁵ This study further investigates the effects of population change on deposits and lending in rural, micropolitan, and metropolitan counties and suggests implications for changes in these trends after the 2020 pandemic.

Banking data are drawn from the FDIC Summary of Deposits (SOD) for branch-level variables and FDIC Consolidated Reports of Condition and Income (Call Reports) for bank-level variables. County-level population data are drawn from the U.S. Census, while indicators for metropolitan, micropolitan, and rural counties are fixed at their year 2000 designations and come from the U.S. Department of Agriculture (USDA). Other county-level control variables include average age and gender ratios (Census), employment (USDA), and personal income (Bureau of Economic Analysis). All data are annual spanning 2000 to 2022, inclusive.

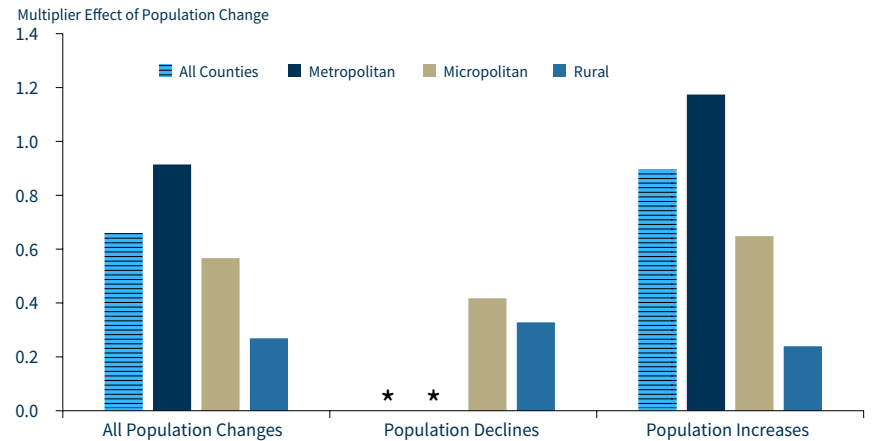
⁴John M. Anderlik and Richard D. Cofer Jr., "Long-Term Trends in Rural Depopulation and Their Implications for Community Banks," *FDIC Quarterly* 8, no. 2 (2014): 44–59, <https://www.fdic.gov/analysis/quarterly-banking-profile/fdic-quarterly/2014-vol8-2/article2.pdf>.

⁵Jeffrey Walser and John Anderlik, "Rural Depopulation: What Does It Mean for the Future Economic Health of Rural Areas and the Community Banks That Support Them?" *FDIC Banking Review* 16, no. 3 (2004): 57–95, <https://archive.fdic.gov/view/fdic/9811>.

DEPOSIT GROWTH RESPONSE TO POPULATION CHANGE VARIES AMONG COUNTY TYPES

Population changes have significant implications for deposits at community banks. In aggregate, a 1 percent change in population is correlated with a 0.6 percent change in deposits (Chart 1). However, this relationship changes significantly if we separately analyze population increases and population declines. Population decreases are not statistically correlated with any change in community bank deposits, but there is a strong correlation between population increase and deposit growth. Specifically, a 1 percent increase in population is strongly correlated with a 0.86 percent increase in community bank deposits. These results are robust across the range of values for population growth that is typical for counties in the past 20 years.⁶

Chart 1
Deposits in Metropolitan Counties Increase More Sharply With Population Growth but Are Uncorrelated With Population Decline



Sources: FDIC, Office of Management and Budget, U.S. Census.
 Note: Counties defined by Office of Management and Budget guidelines. Metropolitan counties have urban core populations greater than 50,000; micropolitan counties have 10,000 to 50,000; rural counties have less than 10,000. The coefficient is the multiplier effect of a 1 percentage point change in population growth on deposit growth.
 *No statistically significant relationship between aggregate or metropolitan population declines and deposit growth.

The relationship between deposits and population growth becomes more nuanced when county types are disaggregated among metropolitan, micropolitan, and rural counties. Metropolitan counties respond most to population growth; deposit growth actually outpaces population growth, with a 1 percent increase in population generating 1.12 percent growth in community bank deposits. In metropolitan counties with declining population, which included about a third of metropolitan counties over the five years ending in June 2022, total deposits at community banks were unaffected by population decreases.

⁶Analysis of the counties that had the sharpest accelerations and decelerations in population growth or the strongest growth reversals revealed no significant additional relationship with deposits.

Deposits at community banks in micropolitan and rural counties grow significantly more slowly than population. In micropolitan counties, a 1 percent increase in population generates only 0.69 percent more deposits. In rural counties, the difference is even greater, as the same population increase is correlated with only 0.23 percent more deposits. This result may have implications for micropolitan and rural counties that have seen recent reversals in population growth trend, in that community banks may not see deposit growth commensurate with population increases. When population decreases in micropolitan and rural counties, total deposits in those counties typically decrease but at a slower rate than the rate of population decrease: for every 1 percent decrease in population, there is a 0.39 percent decrease in deposits in micropolitan counties and a 0.33 percent decrease in deposits in rural counties.

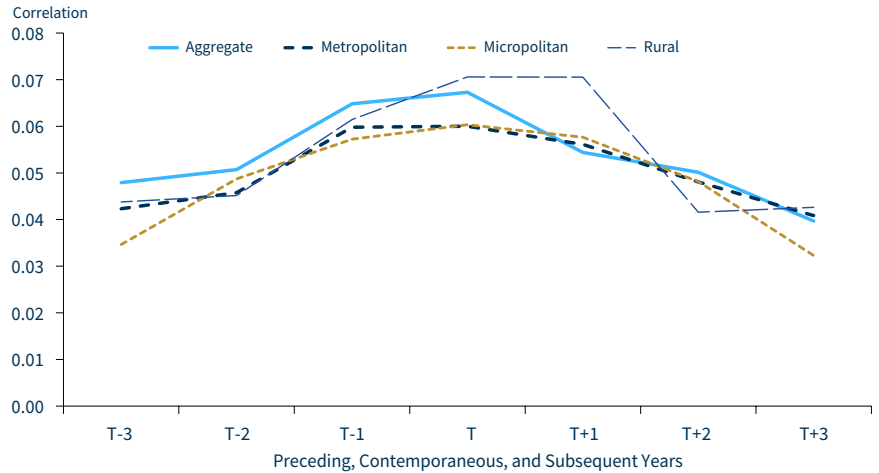
TIMING OF POPULATION CHANGES IS NOT A STRONG PREDICTOR OF TIMING OF DEPOSIT CHANGES

As county populations change, deposits in banks in those counties tend to also change: on average, a 1 percent change in population leads to between a 0.9 percent and 2 percent change in deposits. However, the speed at which deposits respond to population change differs across county types. In metropolitan counties, the strongest correlation suggests that population and deposits change simultaneously (Chart 2).⁷ In micropolitan and rural counties, the correlation between population growth and community bank deposit growth peaks following a one-year lag, suggesting that deposits do not move into micropolitan and rural counties as quickly as they do in metropolitan counties.

While metropolitan counties report the strongest correlation between community bank deposits and population changes several years before and after a population decline, the strength of the correlation is weak (Chart 3). For micropolitan counties, correlation peaks contemporaneously with population outflows, while in rural counties correlation peaks in the year following a population decrease. These correlations, however, are even weaker than correlations in metropolitan counties.

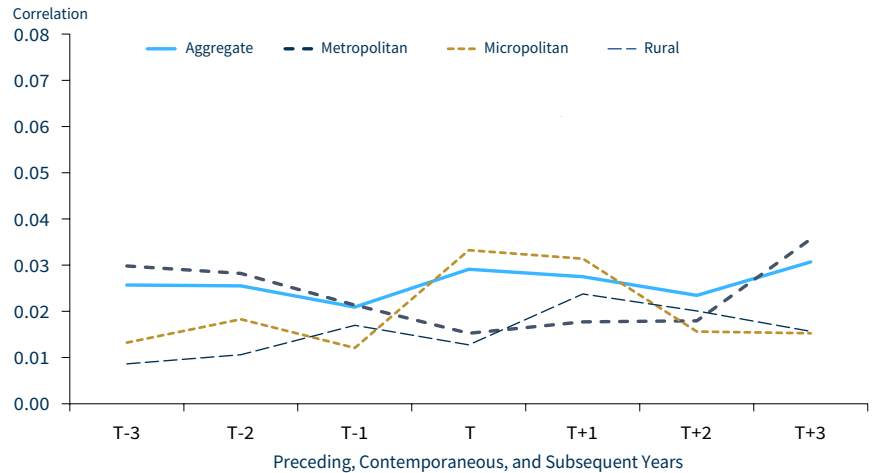
⁷In the case of metropolitan counties, correlation is marginally stronger in the year preceding population growth, which may indicate depositors moving funds into a county before taking up residency, but which may also simply be an artifact of when in the year data are recorded. SOD data are recorded as of June 30 each year, while population data are gathered using surveys conducted throughout the year.

Chart 2
The Correlation of Deposits With Population Inflows
Peaks Later in Rural Counties



Sources: FDIC, Office of Management and Budget, U.S. Census.
 Note: Counties defined by Office of Management and Budget guidelines. Metropolitan counties have urban core populations greater than 50,000; micropolitan counties have 10,000 to 50,000; rural counties have less than 10,000.

Chart 3
The Correlation of Deposits With Population Outflows
Peaks Latest in Metropolitan Counties



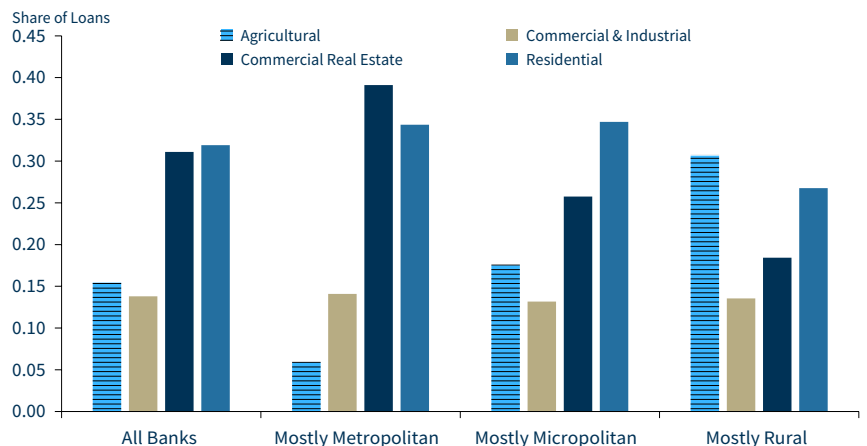
Sources: FDIC, Office of Management and Budget, U.S. Census.
 Note: Counties defined by Office of Management and Budget guidelines. Metropolitan counties have urban core populations greater than 50,000; micropolitan counties have 10,000 to 50,000; rural counties have less than 10,000.

Correlations between population changes and community bank deposits are generally very weak. This indicates that the timing of population increase or decrease is not a strong predictor for when deposits may follow suit. This relationship becomes even weaker when considering deposit outflows. The weakness may arise from the relative rarity of deposit decreases and the insensitivity of bank deposits to population declines, especially in metropolitan counties.

RURAL COUNTIES HAVE MORE AGRICULTURAL LOANS; METROPOLITAN COUNTIES HAVE MORE CRE LOANS

The distribution of loans varies across community banks in rural, micropolitan, and metropolitan counties.⁸ Community banks with most of their deposits in rural counties have relatively more agricultural loans, about 30 percent of total loans by value. The share of agricultural loans by value falls to 17 percent for micropolitan banks and 5 percent for metropolitan banks (Charts 4 and 5). Banks in metropolitan counties have more CRE loans, on average accounting for 38 percent of loans by value. The share of CRE loans by value falls to 26 percent for micropolitan banks and to 18 percent for rural banks. Micropolitan banks have the highest share of residential loans by value, at 35 percent, though the share at metropolitan banks is only marginally lower at 33 percent. At community banks in rural counties, residential loans on average make up 27 percent of total loans by value. C&I loans typically represent 13 to 15 percent of total loans by value, regardless of county type.

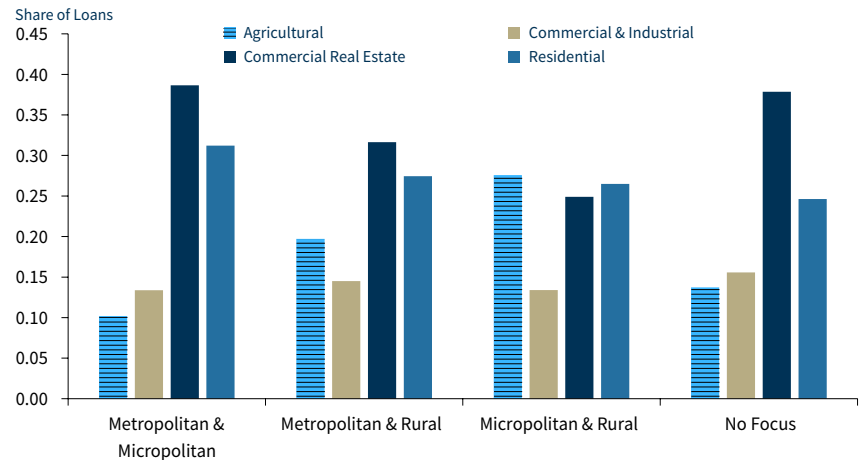
Chart 4
Banks With Deposits Mostly in Metropolitan Counties Concentrate More on Commercial Real Estate Loans and Less on Agricultural Loans



Sources: FDIC, Office of Management and Budget.
 Note: Horizontal axis categories indicate location of deposits. "Mostly" indicates at least 70 percent of deposits in referenced county type. Counties defined by Office of Management and Budget guidelines. Metropolitan counties have urban core populations greater than 50,000; micropolitan counties have 10,000 to 50,000; rural counties have less than 10,000.

⁸Loan data are reported to the FDIC at the bank level, not the branch level, and so direct correlation between loans and county type is difficult. This study uses the approach of creating synthetic counties for each bank with characteristics constructed as the weighted average of all counties in which a bank has branches, with each county's weight calculated as the local share of total bank deposits.

Chart 5
Banks With Deposits Across Diverse County Types
Focus More on CRE and Residential Loans



Sources: FDIC, Office of Management and Budget.

Note: Horizontal axis categories indicate location of deposits. Categories with two county types reflect banks with 40 to 70 percent of deposits in both referenced county types. "No Focus" reflects banks with less than 40 percent of deposits in each county type. Counties defined by Office of Management and Budget guidelines. Metropolitan counties have urban core populations greater than 50,000; micropolitan counties have 10,000 to 50,000; rural counties have less than 10,000.

POPULATION GROWTH CORRELATES WITH LOAN PORTFOLIO GROWTH BUT VARIES BY COUNTY TYPE

Loan volume growth is positively associated with population growth, with effects varying by geography. At community banks with deposits that are mostly in metropolitan counties, loan volume growth correlates with population growth at a one-to-one ratio: 1 percent population growth correlates to 0.98 percent growth in total loan value. In micropolitan counties, loan growth slightly exceeds population growth at 1.13 percent loan growth for every 1 percent growth in population. In rural counties, loan growth falls short of population growth, with 1 percent population growth correlated with only 0.68 percent loan growth.

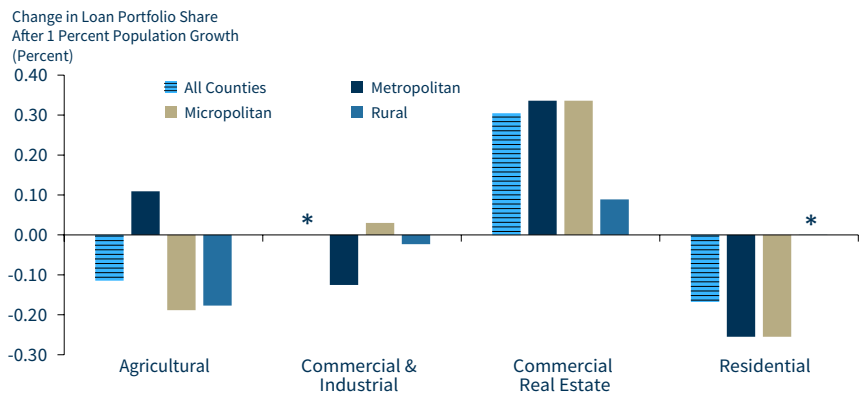
Population growth is associated with changes in loan portfolio composition at community banks, and these effects vary by county type, especially for agricultural loans and for C&I loans. In general, population growth is correlated with a decrease in agricultural loans as a share of total loans, with each percentage point growth in county population reducing the share of agricultural loans by 10 basis points (Chart 6). This reduction accelerates to 18 basis points in micropolitan and rural counties, but the direction reverses to a 10 basis point increase in metropolitan counties, which is an unexpected result.⁹ For aggregate C&I loans, there is no clear relationship between population

⁹Possible explanations include larger population bases allowing for expansion of agricultural loans in metropolitan counties or that metropolitan county banks open branches along the metropolitan county periphery, where more agriculture is possible. The cause of this relationship is beyond the scope of this analysis but may be investigated in future research.

changes and loan portfolio share; however, relationships emerge after differentiating by county types. In metropolitan and rural counties, a 1 percent population increase is correlated with a 9 basis point decrease in loan portfolio share. In micropolitan counties, the relationship reverses to a 7 basis point increase.

For other loan types, the direction of the effect of population growth on loan portfolio shares is consistent across county types; only the magnitude differs. For CRE loans nationally, a 1 percent increase in population correlates with a 30 basis point increase in loan portfolio share. Banks in metropolitan and micropolitan counties experience a greater increase at 37 basis points. The increase is less pronounced for banks in rural counties at only 12 basis points. For residential loans nationally, a 1 percent increase in population correlates with a 19 basis point decline in loan portfolio share. This decline accelerates to 34 basis points in metropolitan and micropolitan counties; however, in rural counties the effect of population growth is negligible on residential loan share—a less than 1 basis point decline.

Chart 6
Population Growth Correlates to Lower Loan Shares of Agricultural and Residential Loans and Higher Shares of Commercial Real Estate Loans



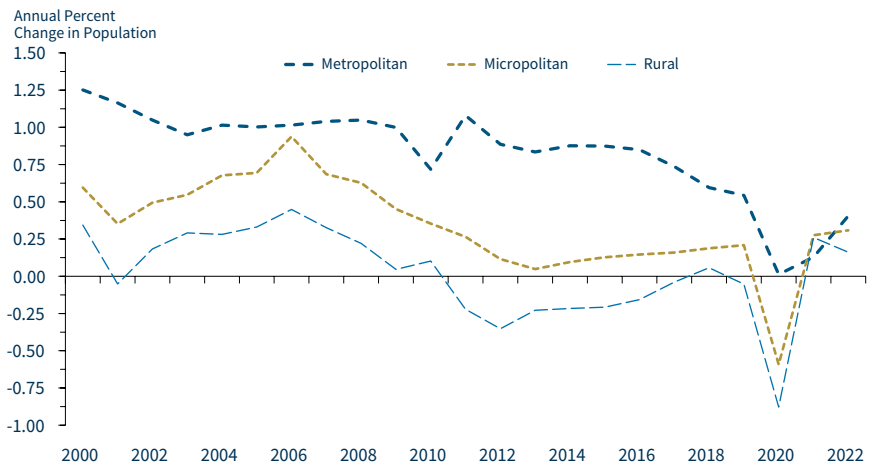
Sources: FDIC, Office of Management and Budget, U.S. Census.
 Note: Counties defined by Office of Management and Budget guidelines. Metropolitan counties have urban core populations greater than 50,000; micropolitan counties have 10,000 to 50,000; rural counties have less than 10,000. Coefficients on C&I loan shares are significant only at the 10 percent threshold. All others at 5 percent.
 *On average, there is no significant effect of population growth on C&I loan share nationally or on residential loan share in rural counties.

In summary, population growth generally is associated with higher CRE loan concentrations and consequently lower relative concentrations of agricultural, C&I, and residential loans. This relationship does not hold for agricultural loans in metropolitan counties, for C&I loans in micropolitan counties, and for residential loans in rural counties.

POPULATION GROWTH IN 2021 DIVERGED FROM THE PRE-PANDEMIC PATTERN

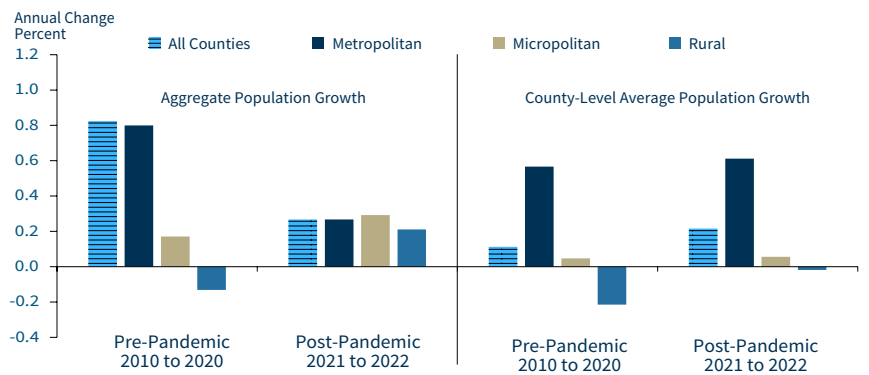
A well-documented trend of rural depopulation has extended back to at least the 1970s.¹⁰ Rural counties are disproportionately likely to have declining populations, with more than 60 percent of rural counties shrinking between 2018 and 2020. Since 2010, aggregate rural population has fallen almost every year (Chart 7). In contrast, population growth in metropolitan counties has outpaced aggregate U.S. population growth, averaging nearly 1 percentage point growth annually since 2000. Micropolitan counties have also seen robust growth, although not nearly at the rates of metropolitan counties.

Chart 7
Rural Populations Have Mostly Decreased Since 2010, While Metropolitan County Populations Have Grown the Fastest



Sources: FDIC, Office of Management and Budget, U.S. Census.
Note: Counties defined by Office of Management and Budget guidelines. Metropolitan counties have urban core populations greater than 50,000; micropolitan counties have 10,000 to 50,000; rural counties have less than 10,000.

Chart 8
Some Long-Term Population Trends Reversed After the 2020 Pandemic



Sources: FDIC, Office of Management and Budget, U.S. Census.
Note: Counties defined by Office of Management and Budget guidelines. Metropolitan counties have urban core populations greater than 50,000; micropolitan counties have 10,000 to 50,000; rural counties have less than 10,000.

¹⁰ See Anderlik and Cofer, “Long-Term Trends in Rural Development,” and Kenneth M. Johnson and Daniel T. Lichter, “Rural Depopulation: Growth and Decline Processes Over the Past Century,” *Rural Sociology* 84, no. 1 (2019):3-27, <https://onlinelibrary.wiley.com/doi/abs/10.1111/ruso.12266>, among others.

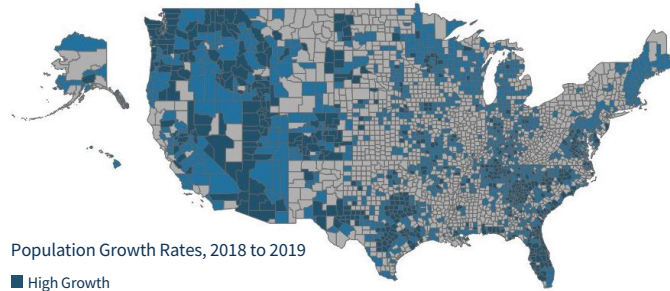
The 2020 pandemic spurred significant changes in population growth patterns. Dense urban centers, where maintaining social distancing was more difficult, became less desirable. Given the exigencies of the pandemic, 2020 may not be a representative year for population trends. Looking to 2021 may provide better insight into trends that could prove to be persistent. In 2021, the data reveal a complete reversal in pre-pandemic growth trends, with rural population growing faster than any other county type, followed by micropolitan counties, and finally metropolitan counties. Because aggregate statistics are often driven by the largest counties and may obscure trends in smaller “average” counties, Chart 8 compares growth trends both in total population and in averages across counties. The left side of the chart shows how aggregate metropolitan county population growth plummeted in 2021. However, the right side shows that the county average continued to grow at the same pace, which implies a reshuffling of growth from big cities to smaller cities and suburban counties. The largest metropolises were the most likely to see large population growth deceleration or outright declines: population declined in the top three most populous U.S. counties and eight of the ten most populous U.S. counties.¹¹ Given these declines, smaller metropolitan counties may have benefited from flight from urban centers. Future data will reveal the extent to which these novel trends prove persistent.

In the two years before the pandemic, population growth was concentrated in metropolitan counties, and 69 percent (753 counties) of those counties expanded. This compares with 47 percent of micropolitan counties and 39 percent of rural counties. Growth was strongest in the West, Upper Midwest, Texas, Florida, and the Northeast (Map 1). After onset of the pandemic, population growth broadened. Generally the same regions of the country continued to grow, but counties that were farther from urban centers and were previously shrinking or were growing anemically reported robust growth comparable to metropolitan centers before the pandemic (Map 2).

In 2021, aggregate U.S. population growth fell sharply, but the number of counties that were growing increased, and the vast majority of newly growing counties were micropolitan or rural. The share of metropolitan counties with population growth was essentially flat at roughly 70 percent, the number of growing counties ticking up only slightly from 753 to 760 (Table 1). For rural counties, this share rose from 39 percent to 44 percent as the number of growing rural counties rose from 541 to 603. Micropolitan counties saw the greatest gains: the share of growing counties rose from 47 percent to 58 percent as the number of growing micropolitan counties rose from 319 to 391.

¹¹ U.S. Census and FDIC staff analysis.

Map 1
Pre-Pandemic Population Growth Was Concentrated Around Metropolitan Counties

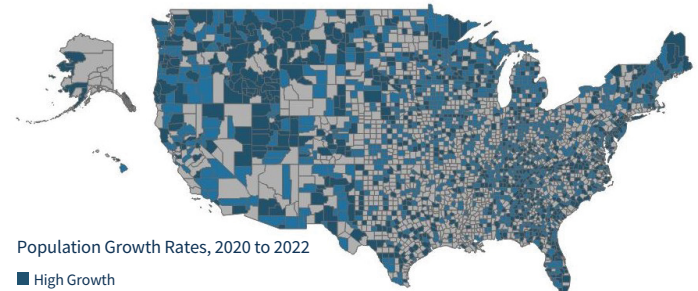


Population Growth Rates, 2018 to 2019

- High Growth
- Moderate Growth
- Decreasing

Sources: FDIC, Office of Management and Budget, U.S. Census.
 Note: Decreasing indicates growth rate below 0 percent. Moderate growth indicates growth between 0 and 0.96 percent. High growth captures the top quartile of the entire 2018 to 2022 period with growth more than 0.96 percent.

Map 2
Post-Pandemic Population Growth Was More Dispersed



Population Growth Rates, 2020 to 2022

- High Growth
- Moderate Growth
- Decreasing

Sources: FDIC, Office of Management and Budget, U.S. Census.
 Note: Decreasing indicates growth rate below 0 percent. Moderate growth indicates growth between 0 and 0.96 percent. High growth captures the top quartile of the entire 2018 to 2022 period with growth more than 0.96 percent.

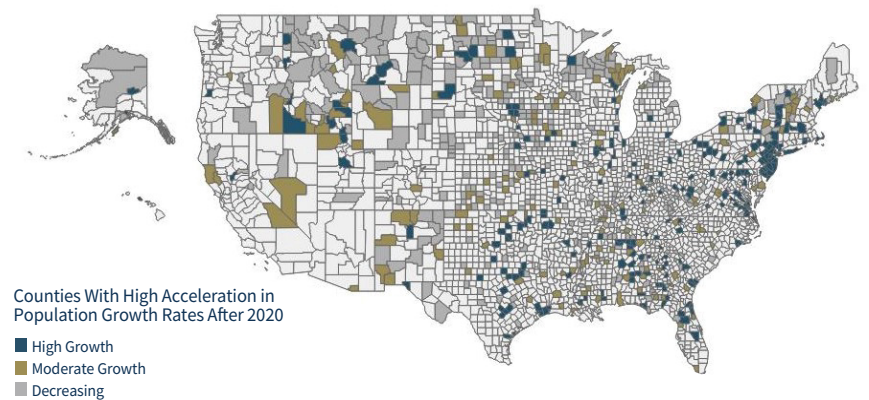
Table 1
County Population Growth Statistics Before and After 2020

	Growth				Decline			
	2018 to 2019		2020 to 2022		2018 to 2019		2020 to 2022	
	Count	Share	Count	Share	Count	Share	Count	Share
Metropolitan	753	69.1	769	71.0	336	30.9	314	29.0
Micropolitan	319	47.3	365	54.2	356	52.7	308	45.8
Rural	541	39.3	599	43.4	837	60.7	780	56.6
Total	1,613	51.3	1,733	55.3	1,529	48.7	1,402	44.7

Sources: Office of Management and Budget, U.S. Census.

New population growth was not distributed evenly across the country. Among rural counties, population growth accelerated most sharply in counties in the North and in the Great Plains states in the Midwest (Map 3). Micropolitan counties reporting the greatest leaps in population growth were sprinkled throughout the United States but with slightly higher concentrations in the Northeast and the Mountain West. The biggest accelerations in population growth among metropolitan counties were concentrated in the Northeast.

Map 3
Population Growth Accelerated in Northern and Great Plains Rural Counties and Western Micropolitan Counties



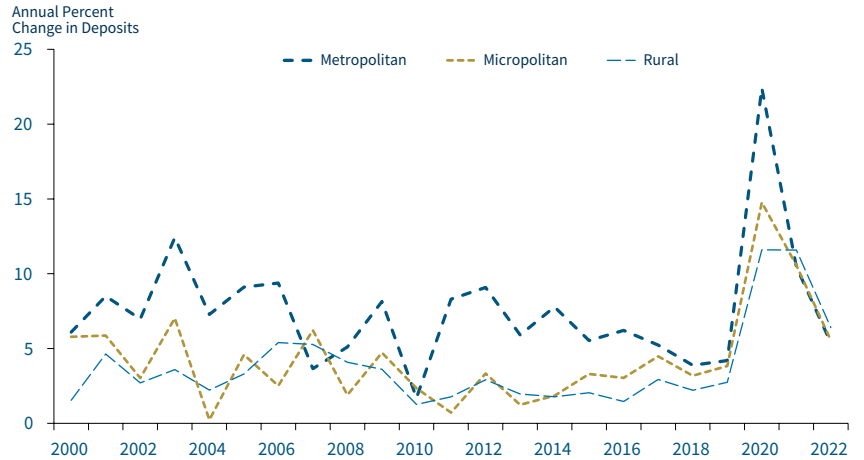
Sources: FDIC, Office of Management and Budget, U.S. Census.
 Note: This map shows counties in the top quartile (across all counties) of post-pandemic acceleration in county population growth rates, with acceleration exceeding 0.76 percentage points.

DEPOSITS SURGED AFTER 2020, AND GEOGRAPHIC PATTERNS MIRRORED POPULATION GROWTH

Because of the unique nature of the 2020 pandemic, its attendant recession, and robust government support programs for households and businesses, deposits grew at unprecedented rates in banks across the country. Chart 9 shows that post-pandemic trends in deposit growth were not driven by outliers but were broadly experienced by counties of all population levels. Before the pandemic, metropolitan counties reported average annual deposit growth of 5.7 percent; after the pandemic, growth surged to 12.7 percent. Post-pandemic increases were even more dramatic in micropolitan and rural counties. From 2010 to 2020, micropolitan counties reported average deposit growth of 4.2 percent, which rose to 12.2 percent in 2021. For rural counties, average deposit growth rose from 4 percent to 11.8 percent. Post-pandemic, the average metropolitan county continued to see faster deposit growth than the average rural county, but deposit growth rates largely converged (Chart 10). In terms of aggregate deposit growth—as opposed to county-level averages—rural and micropolitan counties saw jumps in 2021 that exceeded growth in metropolitan counties.

Chart 9

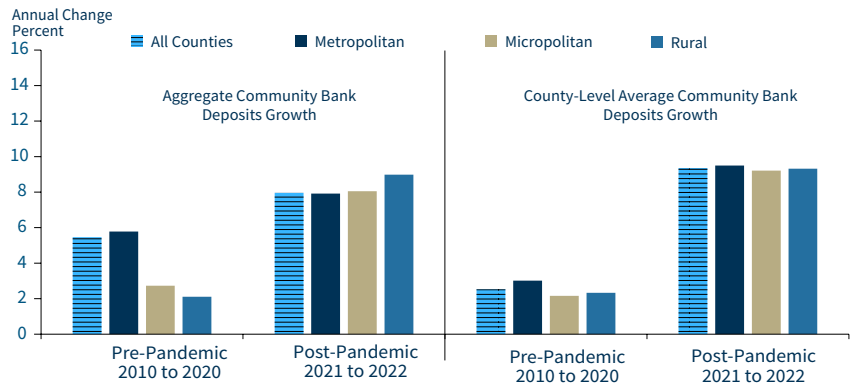
All County Types Have Reported Long-Term Deposit Growth, With Higher Growth Rates in Metropolitan Counties



Sources: FDIC, Office of Management and Budget, U.S. Census.
 Note: Counties defined by Office of Management and Budget guidelines. Metropolitan counties have urban core populations greater than 50,000; micropolitan counties have 10,000 to 50,000; rural counties have less than 10,000.

Chart 10

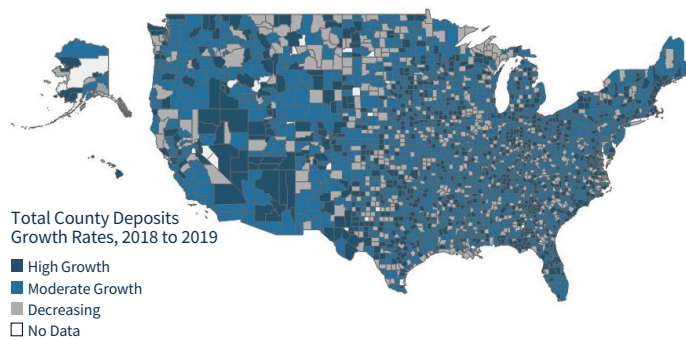
Community Bank Deposits Surged After the 2020 Pandemic



Sources: FDIC, Office of Management and Budget, U.S. Census.
 Note: Counties defined by Office of Management and Budget guidelines. Metropolitan counties have urban core populations greater than 50,000; micropolitan counties have 10,000 to 50,000; rural counties have less than 10,000.

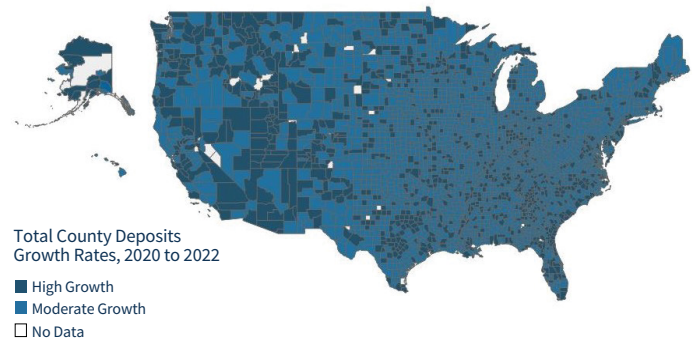
Deposit growth was far more common than population growth before the pandemic. From 2018 to 2019, about half of all counties were growing in population, but over the same period almost 80 percent of counties—2,451 counties—saw total deposits across local community bank branches rise (Table 2). From 2020 to 2021, the share of counties with growing deposits jumped to 98 percent. The geography of deposit growth broadened to include more counties, with rural counties representing the bulk of this broadening (Maps 4 and 5).

Map 4
Pre-Pandemic Growth in Deposits Was Strongest in the Mountain West and South



Sources: FDIC, Office of Management and Budget, U.S. Census.
 Note: Decreasing indicates growth rate below 0 percent. Moderate growth indicates growth between 0 and 4.56 percent. High growth captures the top quartile with growth more than 4.56 percent.

Map 5
Post-Pandemic Growth in Deposits Broadened to Include More Rural Counties



Sources: FDIC, Office of Management and Budget, U.S. Census.
 Note: Moderate growth indicates growth between 0 and 12.42 percent. High growth captures the top quartile with growth more than 12.42 percent.

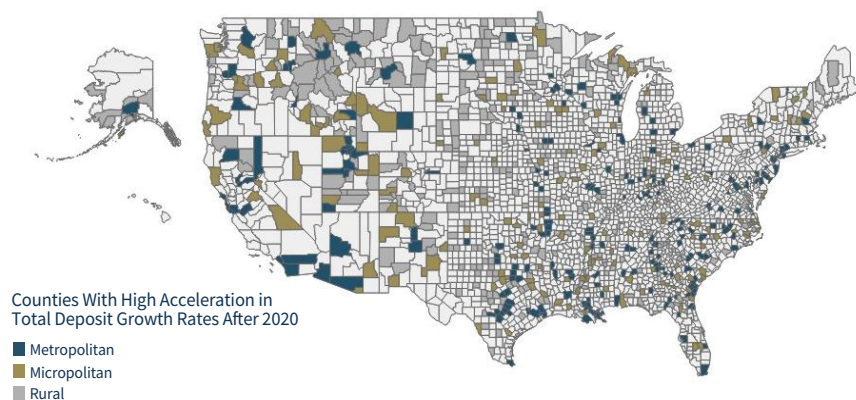
Table 2
County-Level Deposits Growth Statistics Before and After 2020

	Growth				Decline			
	2018 to 2019		2020 to 2022		2018 to 2019		2020 to 2022	
	Count	Share	Count	Share	Count	Share	Count	Share
Metropolitan	909	83.8	1,062	97.8	176	16.2	24	2.2
Micropolitan	531	79.0	661	98.4	141	21.0	11	1.6
Rural	1,011	74.8	1,311	96.9	341	25.2	42	3.1
Total	2,451	78.8	3,034	97.5	658	21.2	77	2.5

Sources: Office of Management and Budget, U.S. Census.

The counties in which deposit growth accelerated the most do not match the counties in which population growth accelerated the most. For rural counties, deposit growth increased the most in the North and Great Plains but also in the Mountain West (Map 5). In micropolitan counties, deposit growth acceleration was most pronounced in the Mountain West but also along the coast in Northern California and Southern Oregon as well as upstate New York (Map 6). For metropolitan counties, deposit growth concentrations occurred in the Southwest and Northwest, despite greater population growth in the Northeast.

Map 6
Growth in Deposits Accelerated Most in Northern Rural Counties and Western Micropolitan Counties



Sources: FDIC, Office of Management and Budget, U.S. Census.
 Note: This map shows counties in the top quartile (across all counties) of post-pandemic acceleration in total county deposit growth rates, with acceleration exceeding 11.46 percentage points.

CONCLUSION

As population has grown and shifted across the United States over the past several decades, community bank managers, executives, and boards have had to consider the implications of population changes on their business models. Among these considerations are how to prepare for changes in deposits and how to allocate resources toward offering different types of loans. This analysis has attempted to quantify the impact of population growth on deposits and loans and to show how these relationships differ between metropolitan, micropolitan, and rural counties. While the results reflect relationships existing over two decades in the 2000s before the 2020 pandemic, they may yet be useful in considering effects of future changes in population.

The 2020 pandemic significantly altered pre-existing patterns of population growth across the country. If these changes persist in coming years, they may meaningfully affect both deposit growth and loan portfolios at community banks. Given the time delays and lower multiplier effects of population changes on deposits, banks in rural counties could see deposits continue to rise even if population growth decelerates or reverses, while banks in more populous counties may see sharper adjustments. Population changes may be associated with increasing loan concentrations. Community banks in rural counties may encounter greater relative demand for nonagricultural loans. The share of CRE loans in bank portfolios may rise in growing counties, while the relative demand for residential loans will likely fall. If the historical relationships outlined in this study continue to hold in coming years, changes in population growth patterns may require community banks to adjust their loan offerings and business practices to meet new demands.

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APPENDIX: REPORTING STANDARDS FOR LOCATION OF BRANCH-LEVEL DEPOSITS

The Summary of Deposits Survey includes the main office and each branch office location operating on June 30 of the survey year and requires institutions to report the deposits assigned to each office location.¹² However, banks are allowed significant discretion in how they determine the location of deposits and are encouraged to report these locations in a way consistent with their existing internal record-keeping practices. Common systems for assigning deposit locations include

- office in closest proximity to the accountholder's address
- office with highest level of account activity
- office where the original deposit account was opened
- office chosen based on branch manager compensation guidelines.

These conditions imply a significant caveat to any geographical analysis of deposits. Banks are not required to shift deposits between branches as accountholders move around the country. Accounts may remain at the original branch long after the accountholder has left; may be moved to where the accountholder is most often using banking services, even if the accountholder lives in another county; or may be assigned to a branch for reasons independent of the location of the accountholder. Results reported in this analysis should be understood in context of these data limitations, which may affect the magnitude of correlations and multiplier coefficients.

¹²FDIC, "Summary of Deposits Reporting Instructions," June 30, 2022, <https://www.fdic.gov/resources/bankers/call-reports/call-summary-of-deposits.html>.