

# Brick-and-Mortar Banking Remains Prevalent in an Increasingly Virtual World

The lobbies, tellers, drive-through lanes, and vaults associated with physical banking offices have long represented the public face of U.S. banks and thrift institutions. These offices have traditionally provided customers with a full spectrum of financial transactions that support the ordinary business of life: cashing a check, getting a small business loan, applying for a mortgage, opening a savings account. Over time, the spread of automated teller machines (ATMs), the rise of online and mobile banking, and the formation of nonbank sources of credit and transaction services have reduced customers' day-to-day dependence on physical offices. Nonetheless, as of June 2014, some 6,669 banks and thrifts continued to operate 94,725 brick-and-mortar offices, providing testament to the enduring value of physical access to banking services in an increasingly virtual banking world.

This report chronicles long-term trends in the banking offices—the headquarters and branches operated by federally insured banks and thrift institutions—from 1935 to 2014.<sup>1</sup> While the number of offices and their density relative to population are estimated back to 1935, this report focuses on the period from 1987 to 2014. The availability of detailed, office-level data for federally insured banks and thrifts during this period provided the FDIC the ability to explore how population and economic growth, as well as technological and legislative forces, have shaped the nation's bank office footprint over almost three decades.

The long-term growth of offices in the United States is highlighted in three distinct cyclical periods since 1987. The total number of offices declined nearly every year between 1989 and 1995, and again between 2009 and 2014. These two periods of decline bracketed a period of significant expansion between 1995 and 2009, when the total number of offices increased each year. This expansion varied geographically and occurred along with the rise of large branch office networks. Four main factors contributed to changes in the distribution of offices since 1987:

- Growing population and geographic shifts in population,
- Banking crises,
- Federal and state legislative changes that relaxed branching laws, and
- Technological innovation and the rise of electronic banking.

This study discusses the notion of *office density* in terms of the number of offices per 10,000 people, facilitating a comparison of how “well-banked” an area is compared with other areas at particular points in time. It also takes a closer look at office growth in the most recent period from 2008 to 2014, using more detailed data to go beyond studying net changes and explore the components of gross openings and closings. Overall, the data provide a better understanding of how bank office trends affect community banks, as defined in the 2012 *FDIC Community Banking Study*.<sup>2</sup>

What are the key considerations in an institution's decision to open or close an office? Many of the factors that determine where to open a new office are specific to the institution and the market in which it operates: its business strategy, competition, experience, real estate costs, and the demographics of the market. Other factors, such as traffic flow and access to a site from nearby roads, are also considered. For an office that is already operating, the institution has data on transactions volume and profitability that can be used when determining whether it should be closed. The collective decisions of individual institutions to open and close offices create the geographic distribution of offices across cities, counties, states, and ultimately the nation.

**The number of offices in the United States has increased over the long term.** The interval between 1935 and 2014 can be divided into five distinct periods: two periods of expansion and three periods of contraction (see Chart 1). The two expansions occurred between 1945 and 1989, and between 1995 and 2009. Contractions occurred between 1935 and 1945, and between 1989 and 1995, and another that began in 2009. Far more offices have been added during

<sup>1</sup> In this paper, “office” refers to the deposit-taking headquarters and branch offices of federally insured banks and thrifts that are identified in the FDIC's annual Summary of Deposits survey. For years before 1987, offices are identified from historical sources. For the Summary of Deposits definition of “office,” see the 2014 Summary of Deposits Reporting Instructions, p. 9, [https://www2.fdic.gov/sod/pdf/SOD\\_Instructions.pdf](https://www2.fdic.gov/sod/pdf/SOD_Instructions.pdf).

<sup>2</sup> FDIC, 2012 *FDIC Community Banking Study* (Washington, DC: Federal Deposit Insurance Corporation, December 2012), <https://www.fdic.gov/regulations/resources/cbi/report/cbi-full.pdf>.

expansions than have been removed during contractions, so that the total number of offices increased by 67,222, or 244 percent, between 1935 and 2014.

**Office growth has outpaced the nation's population growth over the long term and has tended to follow regional migration patterns.** Between 1970 and 2014, the U.S. population grew by over 50 percent, while the number of offices more than doubled. Much of the nation's population growth occurred in the Sunbelt states of the South and West and many of these states also experienced strong office growth.

Domestic migration since 1991 has tended to be from states in the Northeast and Midwest to those in the South and West, as shown in Table 1. The patterns of office changes observed in the Northeast and the South suggest that migration can exert a strong influence on where banks locate offices. The Midwest appears to be an outlier. While net migration to the Midwest was negative, the institutions there nevertheless added offices. Factors other than population that help explain the growth in offices are explored in subsequent sections.

Most offices in the United States are located in metropolitan (metro) areas, and most of the net office growth since 1987 has occurred in metro areas. Just over 79 percent of offices in 2014 were located in metro areas, up from 77.8 percent in 1987, with 11 percent located in micropolitan (micro) areas and the remaining 10 percent located in rural areas.<sup>3</sup> Over 90 percent of the net growth in offices since 1987 occurred in metro areas, 7 percent occurred in micro areas, and slightly more than 2 percent in rural areas. Four of the ten large metropolitan areas that experienced the greatest proportional growth in offices during this period were located in Texas.<sup>4</sup> Six of the ten large metros that experienced the greatest proportional loss of offices were located in California.

The ten metropolitan areas with the largest proportional increases in population between 1987 and 2013 were located primarily in the Sunbelt. All but one of these metros saw at least 32 percent growth in offices between 1987 and 2014 (see Table 2).

<sup>3</sup> The metropolitan and micropolitan area definitions used in this study are from the Office of Management and Budget's 2013 definitions, which are available at <http://www.whitehouse.gov/sites/default/files/omb/bulletins/2013/b-13-01.pdf>. The most recent metro area population data are from 2013. A few dozen offices are located outside of the 50 states, the District of Columbia, and Puerto Rico, in other U.S. territories or outlying areas that are not assigned a metropolitan, micropolitan, or rural designation.

<sup>4</sup> Large metros had at least 500,000 people in 2013.

Chart 1

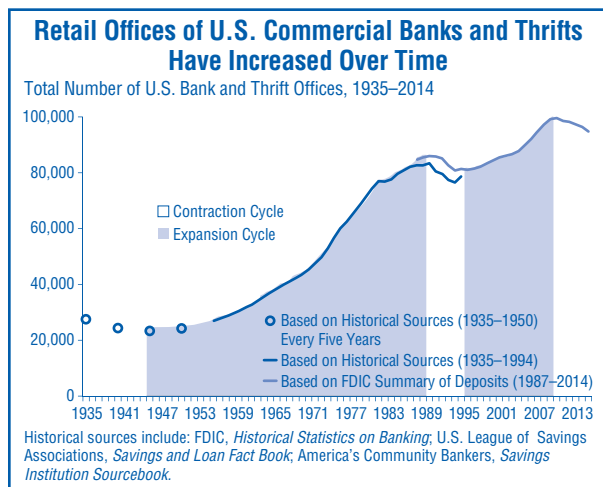


Chart 2

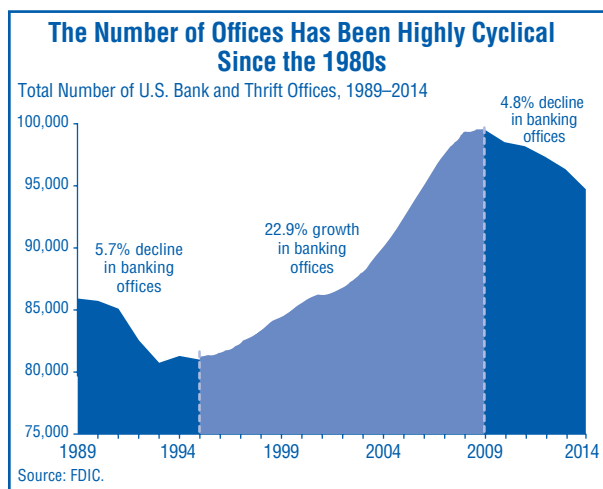


Table 1

Net Domestic Migration Has Favored the South and West		
Region	Annual Average Net Domestic Migration, 1991–2014	Absolute Change in Offices, 1991–2014
Northeast	-266,512	-232
Midwest	-128,922	2,949
West	28,828	1,390
South	366,606	5,570

Sources: FDIC and U.S. Census Bureau.

Population declined or stagnated in some large metros between 1987 and 2013, and nearly all of these cities saw declines in the number of offices. The ten large metro areas in Table 3 that lost the largest percentage of population

Table 2

The Top Ten Large Metro Areas by Population Growth Have Tended to See Growth in Banking Offices			
Metro	Percent Change in Population, 1987–2013	Percent Change in Banking Offices, 1987–2014	Absolute Change in Banking Offices, 1987–2014
Las Vegas-Henderson-Paradise, NV	231.5	169.9	231
Raleigh, NC	145.6	35.4	79
Austin-Round Rock, TX	133.2	91.9	228
McAllen-Edinburg-Mission, TX	127.7	135.9	87
Cape Coral-Fort Myers, FL	123.9	42.7	67
Provo-Orem, UT	119.5	32.8	21
Boise City, ID	114.1	82.2	83
Orlando-Kissimmee-Sanford, FL	109.6	57.8	214
Phoenix-Mesa-Scottsdale, AZ	109.2	36.6	241
Riverside-San Bernardino-Ontario, CA	106.4	9.6	52

Sources: FDIC and U.S. Census Bureau.

Table 3

The Bottom Ten Large Metro Areas by Population Growth Have Tended to See Declines in Banking Offices			
Metro	Percent Change in Population, 1987–2013	Percent Change in Banking Offices, 1987–2014	Absolute Change in Banking Offices, 1987–2014
Youngstown-Warren-Boardman, OH-PA	-10.3	-15.5	-34
New Orleans-Metairie, LA	-6.5	-14.0	-59
Pittsburgh, PA	-5.4	-11.5	-111
Buffalo-Cheektowaga-Niagara Falls, NY	-3.9	2.8	8
Scranton-Wilkes-Barre-Hazleton, PA	-2.4	12.4	25
Cleveland-Elyria, OH	-2.3	-12.1	-97
Toledo, OH	-0.8	-18.9	-41
Dayton, OH	0.8	-12.1	-31
San Juan-Carolina-Caguas, PR <sup>a</sup>	1.1	-3.5	-10
Detroit-Warren-Dearborn, MI	1.3	-3.7	-42

Sources: FDIC and U.S. Census Bureau.  
<sup>a</sup> Population change in Puerto Rico is from 1991 to 2013.

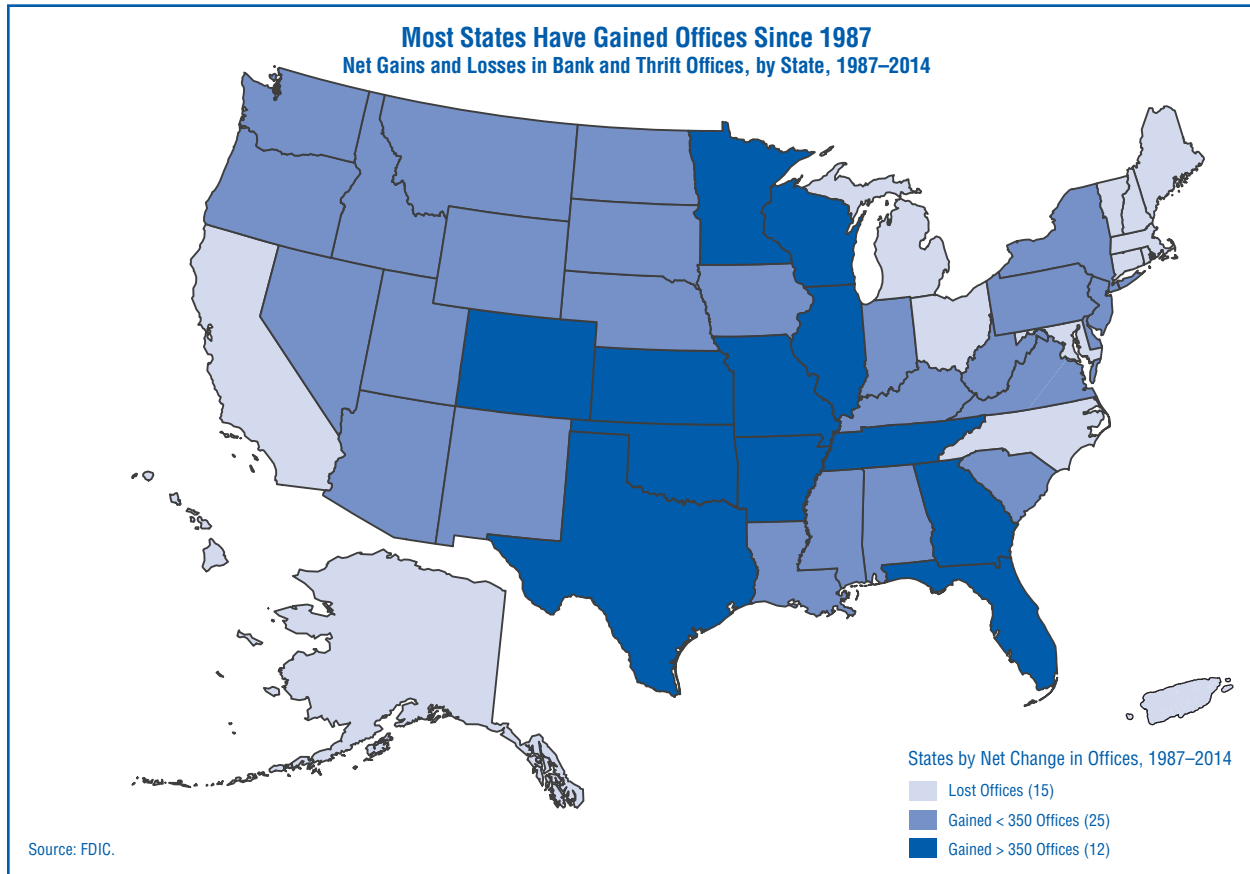
between 1987 and 2013, or gained only a small percentage, are located primarily in post-industrial sections of north-eastern and midwestern states. The fact that New Orleans experienced the second-largest proportional decline in population speaks to the extraordinary effects of Hurricane Katrina.

**Office growth has become more cyclical since the 1980s.** The total number of U.S. banking offices expanded almost continuously between 1945 and

1989.<sup>5</sup> Growth began to slow down in the early 1980s and plateaued in the late 1980s, before it contracted between 1989 and 1995. Sustained growth in the number of offices reemerged between 1995 and 2009, before once again declining after the financial crisis. The decline from 2009 through 2014 has been about as large in absolute terms as that which occurred from 1989 to 1995 (see Chart 2).

<sup>5</sup> In 1982, the number of offices declined by 0.3 percent.

Map 1



Like the period that followed the Great Depression, the two recent periods of decline in banking offices followed major banking crises. Each of these crisis periods was characterized by weak earnings and bank failures, and many institutions were forced to make tough decisions about their use of physical assets. By contrast, the intervening periods of stability were characterized by relatively strong earnings and few failures, enabling many institutions to pursue strategies of growth and expansion. Between 1943 and 1981, the number of FDIC-insured bank failures averaged fewer than five per year. However, the onset of problems in the banking and thrift industries in the early 1980s raised the average number of bank failures to 180 per year between 1982 and 1994. After this crisis subsided, the annual number of failures fell once again to fewer than five per year on average between 1995 and 2007. The onset of the 2008 financial crisis brought about an increase in failures, with over 100 bank failures on average each year between 2008 and 2012.

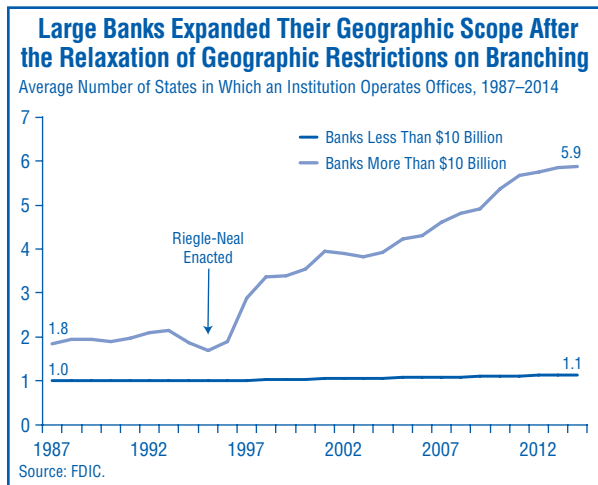
**Expansion and contraction of offices varied geographically across the United States.** As might be expected,

the pattern of office growth has not been uniform across the country (see Map 1). From 1987 to 2014, the number of banking offices declined in 13 states, the District of Columbia, and Puerto Rico, while offices increased in 37 states. The states that gained the most offices during this period lie in a band that stretches through the Midwest from Minnesota to Texas, and that also includes the southeastern states of Tennessee, Georgia, and Florida. In cases such as Texas, where population increased 62 percent, and Florida, where population increased 66 percent, large increases in population help explain increases in the number of bank offices.

**Legislative changes have been an important driver of geographic differences in office growth since the 1980s.** One of the most important legislative changes affecting the geography of banking since the 1980s has been the relaxation of state unit banking laws.<sup>6</sup> In 1979, 12 states were unit banking states that prohibited branching outright: Colorado, Illinois, Kansas, Minnesota, Missouri, Montana, Nebraska, North Dakota,

<sup>6</sup> Unit banking states prohibited banks from branching.

Chart 3



Oklahoma, Texas, West Virginia, and Wyoming.<sup>7</sup> By 1991, all of these former unit banking states had removed these restrictions.<sup>8</sup> As branching restrictions were removed, many of these states saw large increases in total banking offices. Of the ten states that gained the most banking offices between 1987 and 2014, five were former unit banking states and five were states that had imposed other types of geographic restrictions on branching as of 1979.<sup>9</sup> The number of offices in the 12 unit banking states increased more than 1.5 percent from 1989 to 1995, during a time when the total number of U.S. banking offices was contracting.

Another result of legislative change was the nationwide expansion of interstate banking. The Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994 (Riegle-Neal) established a uniform standard by which an institution headquartered in one state could branch into, or acquire banks in, any other state, and allowed institutions operating subsidiary charters in different states to combine them into a single interstate bank.<sup>10</sup>

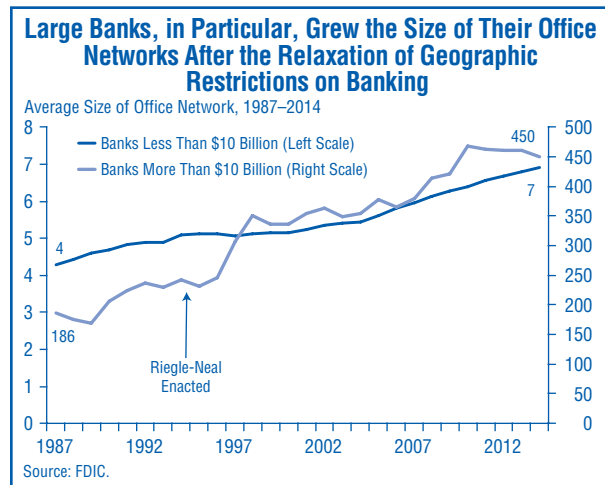
<sup>7</sup> David L. Mengle, "The Case for Interstate Branch Banking," *Economic Review* (November/December 1990): p. 6, [https://www.richmondfed.org/publications/research/economic\\_review/1990/pdf/er760601.pdf](https://www.richmondfed.org/publications/research/economic_review/1990/pdf/er760601.pdf).

<sup>8</sup> B. A. Rehm, "Colorado Ready to Finally Allow Branch Banking," *American Banker* (May 10, 1991).

<sup>9</sup> Mengle, "Interstate Branch Banking," 6. Pennsylvania is an example of a state with some historical geographic restrictions on branching: Banks were permitted to branch only into counties contiguous with the county in which they were headquartered. See Jith Jayaratne and Philip E. Strahan, "The Benefits of Branching Deregulation," *Economic Policy Review* 3, no. 4 (1997): p. 14, <http://www.newyorkfed.org/research/epr/97v03n4/9712jaya.pdf>.

<sup>10</sup> Susan McLaughlin, "The Impact of Interstate Banking and Branching Reform: Evidence from the States," *Current Issues in Economics and Finance* 1, no. 2 (1995): p. 1, [http://www.newyorkfed.org/research/current\\_issues/ci1-2.pdf](http://www.newyorkfed.org/research/current_issues/ci1-2.pdf).

Chart 4



Before Riegle-Neal, the permissibility of interstate acquisitions varied by state.<sup>11</sup>

Both large and small institutions were able to expand geographically as restrictions were relaxed. The effects were especially pronounced in the years between the passage of Riegle-Neal and its nationwide implementation in 1997, when the banking industry experienced its highest annual rates of voluntary charter consolidation.<sup>12</sup> Banking consolidation during this period led to more expansive geographic footprints and larger office networks. In 1987, prior to the relaxation of interstate banking restrictions, large institutions (those with at least \$10 billion in total assets) operated offices in only 1.8 states on average. Chart 3 shows that these large institutions substantially expanded the number of states in which they operated offices beginning around the same time that interstate banking restrictions were relaxed nationally; Chart 4 shows that the size of their office networks began to rise about the same time.

<sup>11</sup> Some states permitted *de novo* entry by out-of-state institutions, others permitted entry via acquisition by out-of-state institutions regardless of where they were headquartered, and others permitted entry only to out-of-state banks headquartered in certain regions of the country. See *History of the Eighties—Lessons for the Future*, vol. 1, chap. 2 (Washington, DC: Federal Deposit Insurance Corporation, 1997), p. 130, [https://www.fdic.gov/bank/historical/history/87\\_136.pdf](https://www.fdic.gov/bank/historical/history/87_136.pdf).

<sup>12</sup> Benjamin R. Backup and Richard A. Brown, "Community Banks Remain Resilient Amid Industry Consolidation," *FDIC Quarterly*, Vol. 8, No. 2 (2014), p. 34, Chart 2, [https://fdic.gov/bank/analytical/quarterly/2014\\_vol8\\_2/article.pdf](https://fdic.gov/bank/analytical/quarterly/2014_vol8_2/article.pdf).

Another ramification of consolidation was the rise of very large office networks.<sup>13</sup> In 1987, only one federally insured banking institution operated a network with more than 1,000 offices; most offices were operated by banks and thrifts that had fewer than 50 offices each. By 2014, 11 institutions operated about one-third of all U.S. banking offices, with networks of more than 1,000 offices each (see Chart 5).

**Amid demographic and legislative changes that helped reshape branch banking in the United States, far-reaching changes in technology have been transforming how people access banking services.** In recent decades, technology has introduced a variety of new ways for customers to access their accounts and interact with their banks. The important banking technologies introduced over the past 50 years include:

- ATMs;
- credit and debit cards;
- telephone banking;
- remote deposit capture (RDC)—scanning checks from a home or business and sending them to the bank electronically for deposit;
- online (internet) banking—accessing a bank account via a laptop, desktop, or tablet computer; and
- mobile banking—accessing a bank account via cell phone or smartphone.

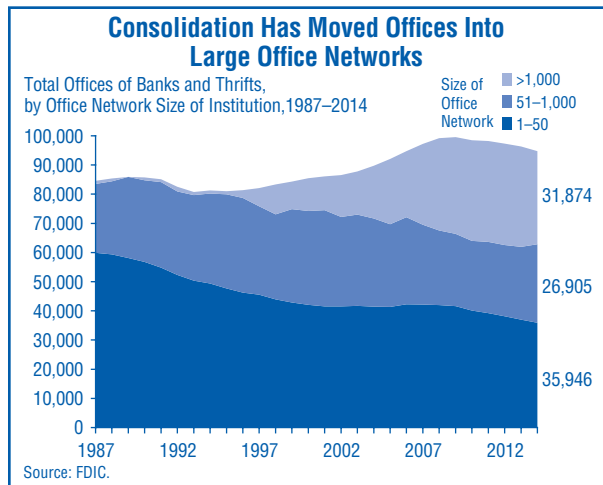
ATMs made their U.S. debut in 1969 and soon spread across the nation, reaching 425,000 by 2010.<sup>14</sup> Universal credit cards became more common in the 1970s, followed by debit cards in the 1990s, giving consumers new payment alternatives at the point of sale.<sup>15</sup> Telephone banking appeared in the 1970s, followed by the beginning of online banking in the 1990s. Online banking has become an increasingly popular channel

<sup>13</sup> For more about consolidation among FDIC-insured banks and thrifts, see Backup and Brown, “Community Banks Remain Resilient Amid Industry Consolidation.”

<sup>14</sup> National ATM Council Inc., <http://natmc.org/documents/2012/10/about-the-atm-industry.pdf>.

<sup>15</sup> For credit cards see Thomas A. Durkin, “Credit Cards: Use and Consumer Attitudes, 1970–2000,” *Federal Reserve Bulletin*, September 2000, pp. 624–625, <http://www.federalreserve.gov/pubs/bulletin/2000/0900lead.pdf>. For debit cards see Fumiko Hayashi, Richard Sullivan, and Stuart E. Weiner, “A Guide to the ATM and Debit Card Industry,” *Federal Reserve Bank of Kansas City*, 2003, pp. 41–42, <http://www.kc.frb.org/publicat/psr/bksjournal/articles/atmpaper.pdf>.

Chart 5



for consumers: According to data from the Pew Research Center, 61 percent of Internet users banked online in 2013, up from 44 percent in 2005, and 18 percent in 2000.<sup>16</sup> The past ten years have seen the advent of RDC, a technological alternative for one of the most common teller transactions: depositing checks. After the 2004 Check Clearing for the 21st Century Act, banks were authorized to accept electronic deposits based on digital images of checks. Most recently, the widespread adoption of internet-enabled smartphones and tablets has given even more impetus to the development of mobile banking and payments. In 2013, 35 percent of cell phone users said they had used their phone to check their bank account or perform transactions, up from 18 percent in 2011.<sup>17</sup>

The cumulative effect of these new technologies has been a decline in the number of transactions taking place at physical banking offices. One study shows that the average number of teller transactions per office declined by 45 percent between 1992 and 2013, from 11,700 transactions per month to 6,400.<sup>18</sup> Using a credit or debit card has become more common than writing a check. According to Federal Reserve data, paper checks accounted for only 15 percent of noncash payments in 2012, down from 46 percent in 2003. By contrast, universal credit and debit cards accounted for 58 percent of noncash payments in 2012, up from 38 percent in 2003. The total number of noncash trans-

<sup>16</sup> Susannah Fox, “51% of U.S. Adults Bank Online,” Pew Research Center (August 7, 2013), p. 9, [http://www.pewinternet.org/files/old-media/Files/Reports/2013/PIP\\_OnlineBanking.pdf](http://www.pewinternet.org/files/old-media/Files/Reports/2013/PIP_OnlineBanking.pdf).

<sup>17</sup> *Ibid.*, p. 10. Pew first asked about mobile banking in 2011.

<sup>18</sup> Financial Management Solutions Inc., *2013 FMSI Teller Line Study* (N.P., 2013), <http://www.fmsi.com/fullpanel/uploads/files/2013-fmsi-teller-line-study-white-paper-00001.pdf>.

actions grew by 50 percent from 2003 to 2012, as the number of checks written declined.<sup>19</sup>

Even with the innovations of the past 50 years, consumers continue to value and use physical banking offices. Today there are more banking offices per capita than in 1970, when many of today's most popular electronic banking alternatives either did not yet exist or were not yet widely available. Moreover, according to the 2013 FDIC National Survey of Unbanked and Underbanked Households, visiting a teller remains the most common way for households to access their accounts.<sup>20</sup> Although mobile banking would appear to be an appealing substitute for bank office visits, and is a fast-growing option, it remains one of the least common ways for consumers to access their accounts.<sup>21</sup> Among households that preferred online or mobile banking, most also reported visiting tellers to access their accounts.<sup>22</sup>

Nonetheless, as alternative payment and banking methods become more mainstream, fewer transactions are being conducted at offices. The rise of RDC, more sophisticated ATM terminals, and the proliferation of smartphones appear to be reducing the frequency with which bank customers are visiting their local branch to perform simple transactions. Moreover, the frequency of visits is lower for younger individuals. A recent survey indicates that 19 percent of people ages 18 to 29 visited a bank or credit union branch in the previous week, compared with 29 percent of those ages 30 to 49.<sup>23</sup> However, the available data on balance show that most bank customers continue to place value on physical offices as part of a diverse suite of retail banking options.

In order to evaluate how technological alternatives may affect the total number of physical banking offices, a measure of how prevalent those offices are relative to the total demand for banking services is needed. If physical banking offices were indeed becoming less prevalent over time, then that would provide some

<sup>19</sup> Federal Reserve System, *The 2013 Federal Reserve Payments Study—Summary Report and Initial Data Release* (Federal Reserve System, 2013, revised July 2014), p. 42, [http://www.frbservices.org/files/communications/pdf/general/2013\\_fed\\_res\\_paymt\\_study\\_summary\\_rpt.pdf](http://www.frbservices.org/files/communications/pdf/general/2013_fed_res_paymt_study_summary_rpt.pdf).

<sup>20</sup> FDIC, *2013 FDIC National Survey of Unbanked and Underbanked Households* (Washington, DC: Federal Deposit Insurance Corporation, October 2014), p. 53, Figure 8.1, <https://fdic.gov/householdsurvey/2013report.pdf>.

<sup>21</sup> *Ibid.*

<sup>22</sup> *Ibid.*, p. 59, Table 8.3.

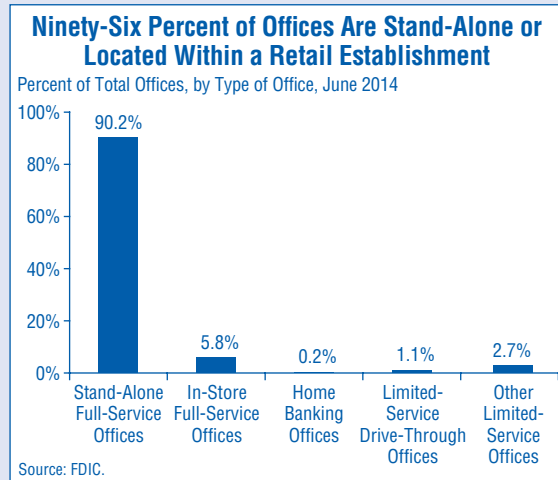
<sup>23</sup> Chris Kahn, "March 2014 Financial Security Survey," BankRate.com (2014), N.P., <http://www.bankrate.com/finance/consumer-index/financial-security-charts-0314.aspx>.

## Types of Banking Offices

Not all physical banking offices take the same form. According to the 2014 FDIC Summary of Deposits survey, more than 90 percent of total banking offices take the form of stand-alone, full-service offices. At a distant second are those offices located in another retail establishment, such as a grocery store (see Chart 6). Together, in-store offices and stand-alone offices make up 96 percent of the offices operated by FDIC-insured institutions.

Historical sources suggest that in-store branches were rare among commercial banks until they boomed in the late 1980s. The number of these offices grew an average of nearly 30 percent per year from 1986 to 1996.<sup>a</sup> Although in-store offices can cost considerably less to open (from one-fifth to one-third of the startup cost of a stand-alone office), for many banks they tend to generate fewer loans and deposits—and thus less income—than stand-alone, full-service offices.<sup>b</sup>

Chart 6



<sup>a</sup> Christopher A. Williams, "Banks Go Shopping for Customers," *The Regional Economist* (October 1997), N.P., <https://www.stlouisfed.org/publications/re/articles/?id=1789>.

<sup>b</sup> "US Bank Excels in In-Store Banking" (*Retail Banking Strategies*, February 2010); "BOK's Decision to Ditch In-Store Branches Shows Banks' Predicament" (Barlow Research Associates Inc., November 2014).

evidence that new banking technologies may represent substitutes for those banking offices in serving bank customers. But if physical banking offices are as prevalent or more prevalent today than they were in the past, then perhaps technology should not be viewed as a perfect substitute for brick-and-mortar banking offices.

## Measuring Office Density

There are a number of alternative ways one might attempt to measure the prevalence of physical banking offices. All of them are related in some way to population density. For example, because the population of New York City is more than 125 times greater than that of Bismarck, North Dakota, the fact that New York City has more banking offices than Bismarck does not necessarily mean that banking offices are more prevalent in New York. The *density of banking offices* should be expressed by a measure that scales the number of offices in different places so they can be compared. Past researchers have taken several approaches to make this comparison. A recent FDIC study estimated service areas for offices based on reasonable travel distances.<sup>24</sup> Similarly, Ergunor (2010) calculated a measure of office access for Census tracts in Ohio that uses all offices within ten miles of a tract's center.<sup>25</sup>

A simpler way to express the density of banking offices is to calculate the number of offices per 10,000 people for a location. Offices per 10,000 people is easy to construct and understand, and although other measures might include additional relevant variables, offices per 10,000 people still can be used to make meaningful comparisons over time and across geographies. Chart 7 depicts the density of banking offices between 1935 and 2014 in terms of this definition.

**The factors that determine the number of offices also help shape changes in density.** Chart 7 shows that the density of banking offices increased from 2.2 in 1970 to 2.9 in 2014—a period during which population grew by 56 percent and the number of offices grew by 109 percent. Thus the per capita density of offices increased by about one-third during a period when a number of important banking technologies were being introduced. Like the total number of banking offices, the density of banking offices follows cyclical patterns. Clear and substantial declines in office density were observed after the banking crises of the 1930s, the 1980s, and the 2000s.

There is evidence that changes in density at the state level also have been influenced by the relaxation of

<sup>24</sup> Eric C. Breitenstein, Karyen Chu, Kathy Kalsner, and Eric W. Robbins, "Minority Depository Institutions: Structure, Performance, and Social Impact," *FDIC Quarterly*, Vol. 8, No. 3 (2014): p. 56. [https://fdic.gov/bank/analytical/quarterly/2014\\_vol8\\_3/mdi\\_study.pdf](https://fdic.gov/bank/analytical/quarterly/2014_vol8_3/mdi_study.pdf).

<sup>25</sup> Ozgur Emre Ergunor, "Bank Branch Presence and Access to Credit in Low- to Moderate-Income Neighborhoods," *Journal of Money, Credit, and Banking*, Vol. 42, No. 7 (October 2010): pp. 1327–28.

Chart 7

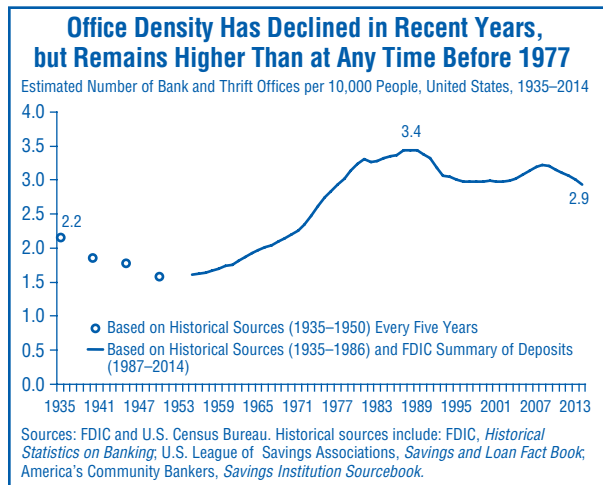
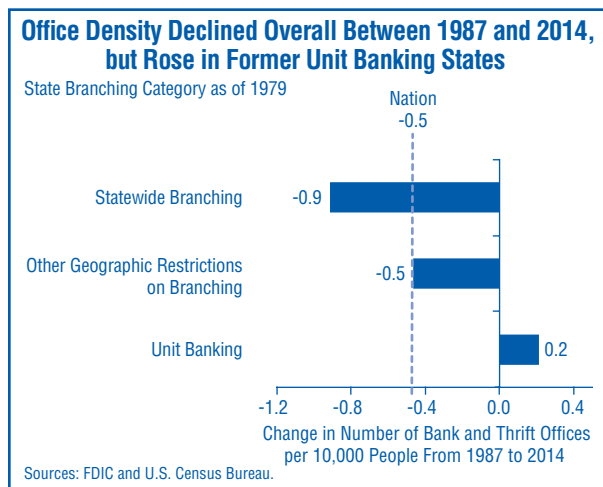


Chart 8



state restrictions on branching. States with the strongest restrictions on branching in 1979 saw an increase in office density once those restrictions were lifted, while states with some geographic restrictions on branching saw a decline in density equal to the national average. The largest decline in density after 1987 was observed among states that already allowed statewide branching in 1979. These results are consistent with the idea that unit banking laws had restricted the desired prevalence of banking offices in these states before 1987, and that the elimination of the restrictions contributed to increases in banking offices since then (see Chart 8).

Changes in the density of offices since the 1970s further suggest that new technologies have had, at best, a limited effect on the prevalence of offices. Because mobile, ATM, online, and other alternative banking channels reduce the number of transactions that require



### Changes in Density at the State and County Level

Per capita density can be used to compare the relative prevalence of physical banking services across geographies as well as over time. For the United States as a whole, the density of banking offices has declined by about 15 percent since 1987. But to the extent that the measure of density expresses how “well banked” a specific area is, one might expect to see less well banked areas become more dense over time, while more densely banked areas become less dense over time. To the extent that this is the case, the location of banking offices would represent a “mean-reverting” process, where extremes to the high side or the low side are narrowed by market forces over time.

The data, however, suggest that changes in banking density over time at the state and county level are generally not mean-reverting. Chart 9 shows that changes in state-level density between 1987 and 2014 appear to be unrelated to the density of banking offices in each state at the beginning of the period. Similarly, Chart 10 shows that changes in county-level density between 1987 and 2013 also were unrelated to density at the beginning of the period.<sup>a</sup> Taken together, these charts suggest that states and counties that started out with higher-than-average density tended to stay that way over time, as did states and counties with below-average density.

One reason why density tends not to be mean-reverting across states and counties is the presence of relatively stable long-term differences in density between metro, micro, and rural counties. Chart 11 shows that among these three county types, rural counties exhibit the highest average density, followed by micro counties, with metro counties showing the lowest average density. The intuition behind these differences seems clear: Because people live farther apart in less populated rural areas, a higher number of banking offices per 10,000 people is necessary to adequately serve those areas. Chart 11 also shows that the differences in density between county types have remained fairly stable over time. Average density in rural and micro counties, in particular, has declined very little since 1987. It takes about as many offices, in per capita terms, to serve rural and micro counties today as it did in 1987. By contrast, density in metro counties has undergone a 15 percent decline since 1987.

Part of the decline in U.S. office density that has taken place since the mid-1980s can be attributed to the multi-decade trend of rural depopulation in the United States.<sup>b</sup> Between 1980 and 2010, while the nation’s population was growing by 36 percent, half of U.S. rural counties lost population. Moreover, the depopulation trend actually

accelerated compared with the period between 1970 and 2000. With rural counties having an average office density that was nearly twice that of metro counties in 2013, the movement of people out of rural counties and into metro counties had the effect of lowering the density of banking offices for the nation as a whole.

Chart 9

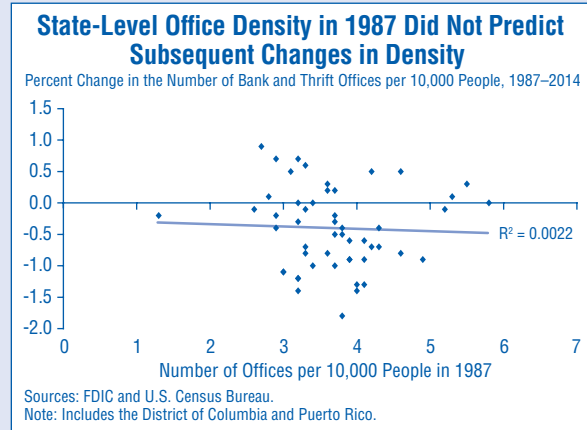


Chart 10

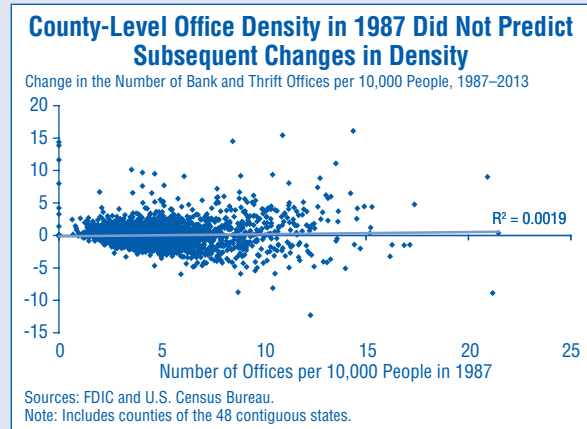
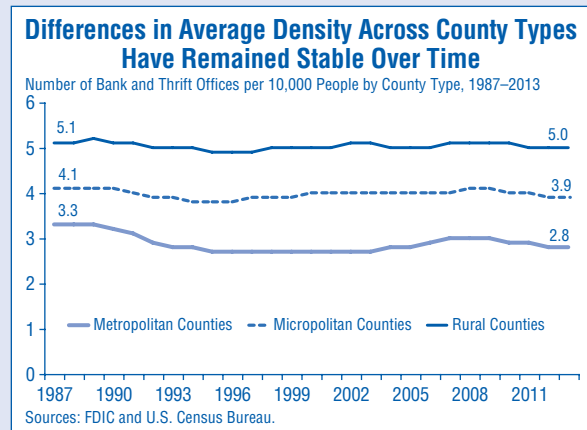


Chart 11



<sup>a</sup> The most recent county population data are from 2013.

<sup>b</sup> See John M. Anderlik and Richard D. Cofer Jr., “Long-Term Trends in Rural Depopulation and Their Implications for Community Banks,” *FDIC Quarterly*, Vol. 8, No. 2 (2014), [https://www.fdic.gov/bank/analytical/quarterly/2014\\_vol8\\_2/article2.pdf](https://www.fdic.gov/bank/analytical/quarterly/2014_vol8_2/article2.pdf).

a visit to a banking office, one might expect that banks should be able to operate fewer offices and still serve the same number of customers. However, at 2.9 offices per 10,000 people in 2014, the density of offices is currently greater than at any time before 1977, when many of today's banking technologies were either not available or had not yet become mainstream. Despite the far-reaching innovations that have occurred in the delivery of banking services, the ongoing presence of large numbers of physical offices suggests that they still create real value in allowing banks to interact with their customers.

### Components of Structural Change

In addition to the long-term trends in the number and location of offices, it is also important to understand the components of structural change between periods. For example, how many new offices were opened by existing banks versus new banks? How many offices were closed as a result of failures, mergers, or charter consolidations versus rationalization of branch structures by surviving institutions? The availability of more detailed data starting in 2008 allows for a closer look at changes in office structure that can address these issues.

FDIC-insured institutions opened and closed thousands of offices between 2008 and 2014.<sup>26</sup> Chart 12 shows that just more than 11,000 unique offices were added to the FDIC's Summary of Deposits survey during this six-year period, the vast majority of which were newly created offices, as opposed to pre-existing offices being newly added to the survey. Of the 15,500 offices that were closed over this period, just a small fraction were closed as a direct result of bank failures or mergers.

Another important recent trend has been a sustained slowdown in the number of newly created offices, which was exceeded in almost every year by the number of offices closed (see Charts 13 and 14). Office openings since 2008 have been held back in part by a lull in the creation of new banking charters, while office openings at existing institutions have also declined in a less than favorable economic environment. Only 15 new charters were established between 2010 and 2013, compared with 510 new charters between 2006 and 2009.<sup>27</sup> Some

<sup>26</sup> Openings and closings are measured from June of each year.  
<sup>27</sup> Backup and Brown, "Community Banks Remain Resilient," p. 35. New charters include *de novo* institutions, preexisting institutions that converted to an insured bank or thrift (such as conversions from credit unions), as well as any other newly insured banking institution that filed a year-end financial report.

Chart 12

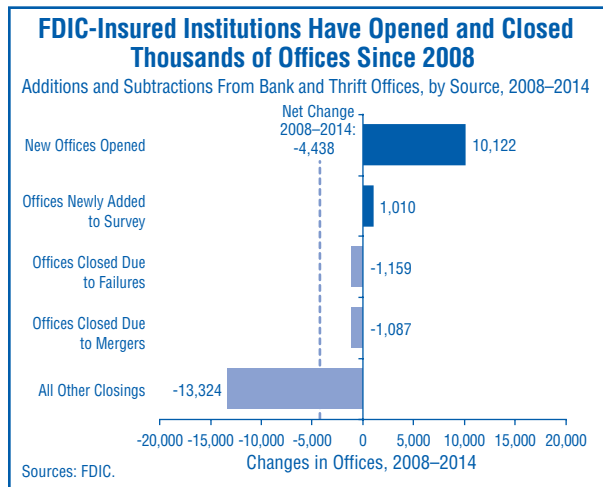


Chart 13

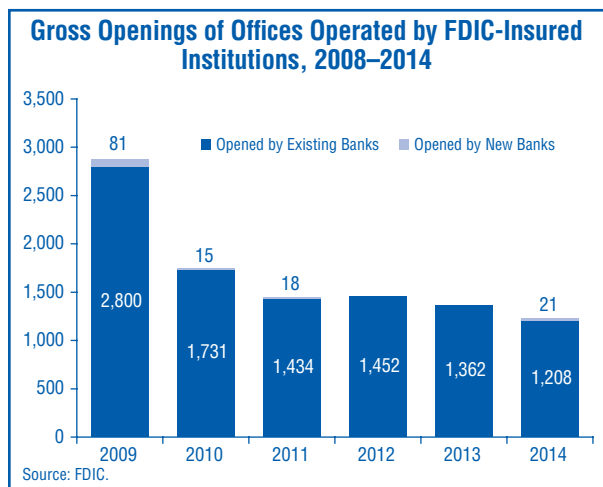
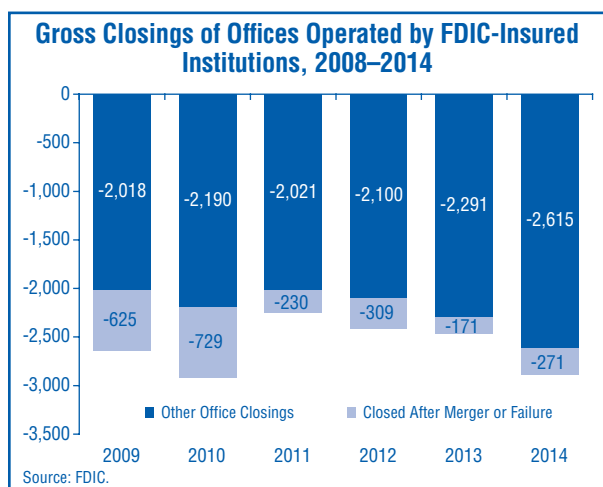


Chart 14



large institutions have also recently announced plans to rationalize their branch structures as a means to control costs after the financial crisis, while others pared back office expansion plans.<sup>28</sup>

As a percent of offices operating in 2008, more openings and closings of banking offices occurred in metro areas between 2008 and 2014 than in micro or rural areas (see Chart 15). While 79 percent of offices were located in metro areas in 2008, some 85 percent of office closings and 89 percent of office openings through 2014 occurred in metro areas. By contrast, 11 percent of offices located in micro areas in 2008 saw only 9 percent of office closings and 7 percent of office openings through 2014. Similarly, while 10 percent of offices were located in rural areas in 2008, rural areas saw only 6 percent of office closings and 4 percent of openings through 2014.

Notably, the data indicate that the majority of the offices operated by FDIC-insured institutions that fail or merge out of existence continue operating under new ownership after the failure or merger. About 78 percent of the offices of failed banks continued to report in the next Summary of Deposits survey, as did nearly 85 percent of the offices operated by banks undergoing a voluntary merger or consolidation (see Chart 16).

Although banks of all sizes have closed offices since 2008, office closings have been concentrated among just a few large institutions. Since 2008, just 15 institutions have accounted for one-third of all gross office closings. These 15 institutions include some of the nation's largest banks, as well as large regional banks, two of which—Washington Mutual and Wachovia—failed or were forced to merge during the crisis. Other large institutions have pared back their extensive office networks as part of their post-crisis restructuring efforts. In all, just 52 institutions have accounted for one-half of office closings since 2008.

### Trends in Community Bank Offices

Because of their focus on relationship banking, trends in office structure are particularly important for community banks.<sup>29</sup> Amid a long-term trend of banking industry consolidation, the number of community bank

<sup>28</sup> J. Ma, "Wells Fargo Mulls Fewer Branches as Rivals Cut Back," *Investor's Business Daily*, March 7, 2012.

<sup>29</sup> For the definition of "community bank," see Chapter 1 of the *FDIC Community Banking Study*, 2012, <https://fdic.gov/regulations/resources/cbi/report/cbi-full.pdf>.

Chart 15

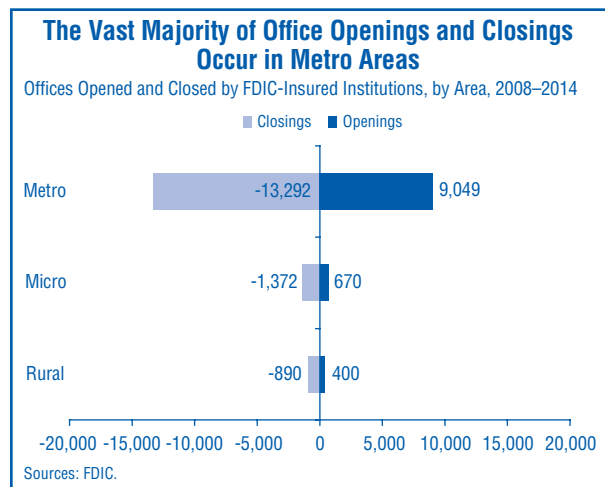
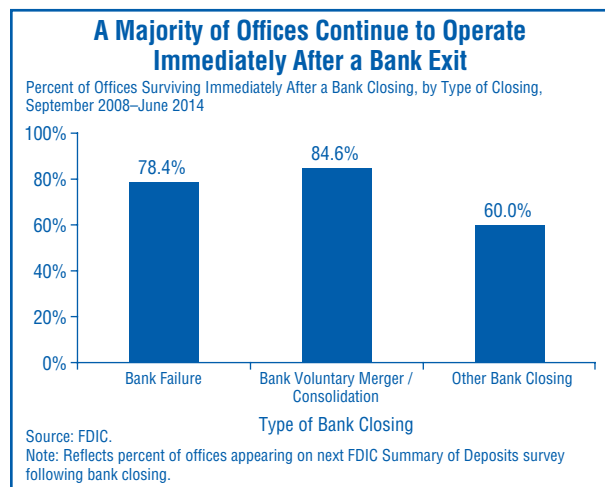


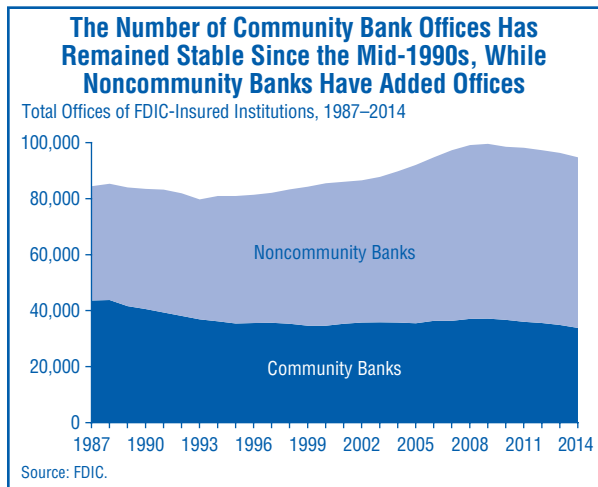
Chart 16



charters declined by 45 percent between 1994 and 2014, while the number of noncommunity bank charters declined by 71 percent. However, amid these substantial declines in banking charters, the number of community banking offices declined by just 6.5 percent, while the number of noncommunity banking offices increased by 36 percent (see Chart 17).<sup>30</sup> The net result was an increase in the average size of the community bank office network, from 3.2 offices in 1994 to 5.5 offices in 2014, while the average number of offices operated by noncommunity banks rose from 26.4 to 123.5. So while community banks experienced modest increases in the size of their office networks, these networks remained at sizes that were generally more amenable to local control and decision-making than

<sup>30</sup> Change in banking charters and offices calculated from midyear 1994 through midyear 2014.

Chart 17



the dozens or hundreds of offices operated by many noncommunity banks.

The 2012 *FDIC Community Banking Study* observed that community banks held the majority of local deposits in rural and micro counties through 2011.<sup>31</sup> Data through 2014 indicate that community banks continue to maintain these majorities, and now hold 72 percent of deposits in U.S. rural counties and 56 percent of deposits in micro counties (see Chart 18). While the majority of community bank deposits continue to be held in metro counties, the community banks' share of total metro area deposits has declined from 36 percent in 1987 to 13 percent in 2014. It is primarily this loss of market share in metro areas that has driven down the community bank share of total industry deposits from 41 percent in 1987 to 16 percent in 2014.

The 2012 *Study* also identified 629 counties in which community banks operated 100 percent of all banking offices as of 2011.<sup>32</sup> This report extends that analysis by identifying 646 counties where community banks held 100 percent of local deposits as of 2014 (see Map 2).<sup>33</sup> Further insight into markets where community banks predominate is provided in Map 2; shaded regions indicate counties where community banks hold between 75 percent and 99 percent of total deposits. In all, there were 1,244 counties in the United States and Puerto Rico where community banks held at least 75 percent

<sup>31</sup> *FDIC Community Banking Study*, p. 3-6.

<sup>32</sup> *Ibid*, p. 3-5.

<sup>33</sup> "Counties" refers to counties and other geographic areas (parishes, *municipios*, districts, and islands, for example) within the 50 states, the District of Columbia, and Puerto Rico that are treated as county equivalents by the U.S. Census Bureau.

Chart 18

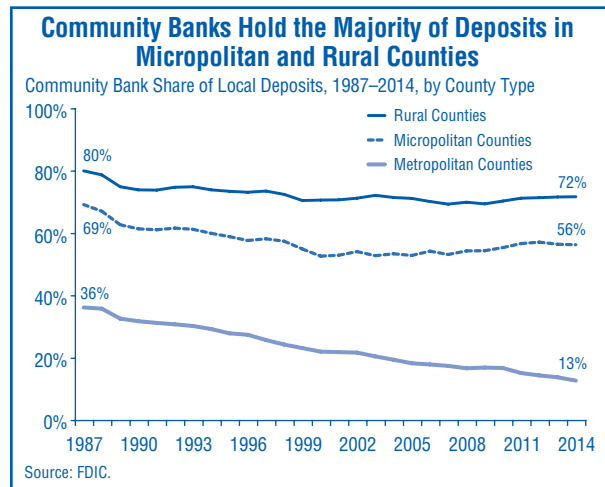
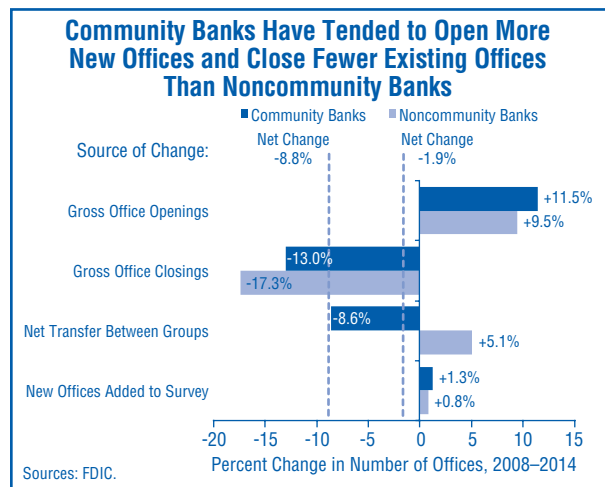


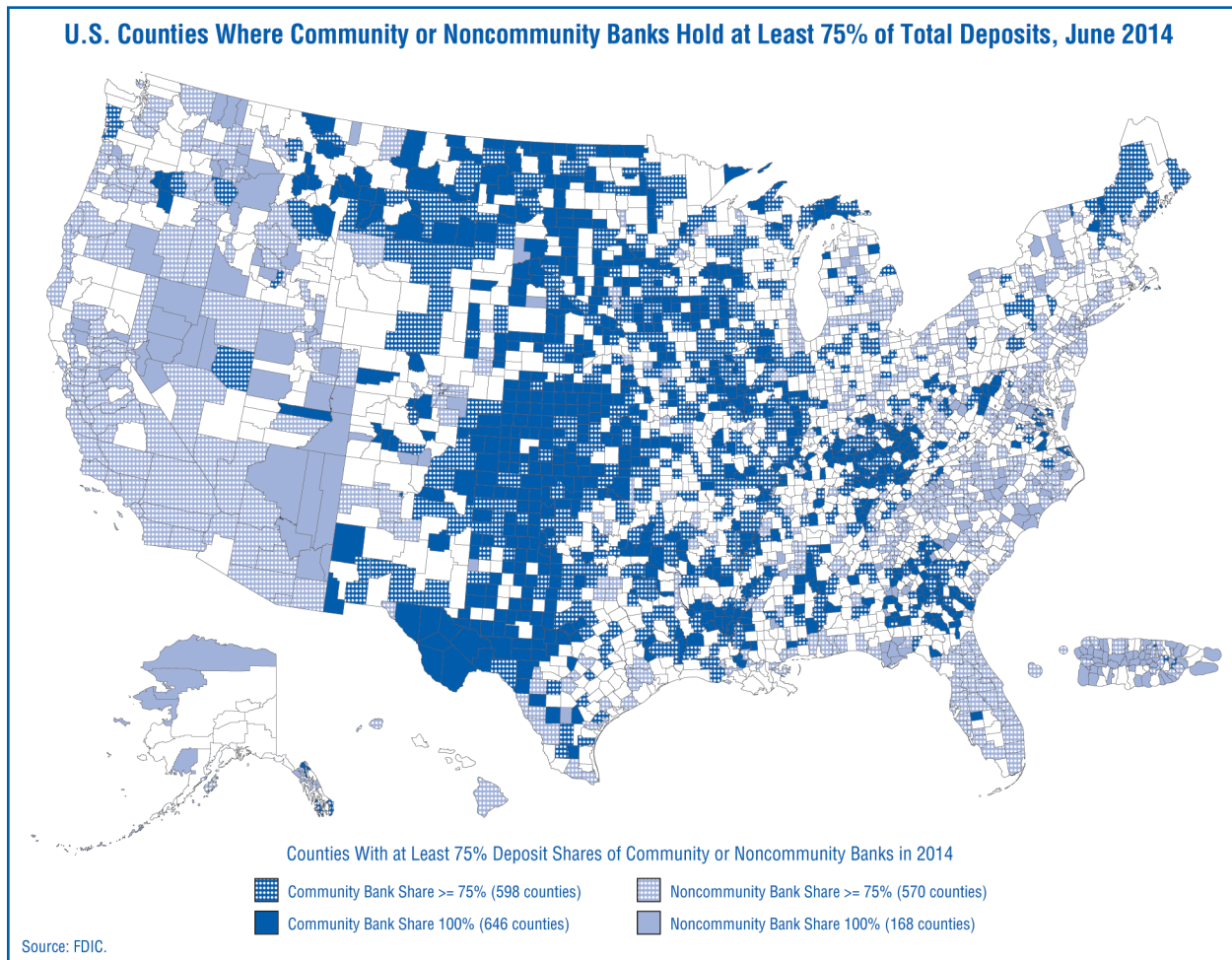
Chart 19



of banking deposits in 2014. These counties accounted for nearly 40 percent of all counties and 7.3 percent of the U.S. population. Noncommunity banks held at least 75 percent of banking deposits in 738 counties, accounting for 23 percent of all counties and 64 percent of the U.S. population.

It has already been observed that the total number and density of banking offices have declined during the post-crisis period and that total office closings have exceeded office openings since 2010. However, amid these trends, community banks proved more reluctant to close branches and more willing to open new branches than did noncommunity banks. Chart 19 shows that the number of new offices *opened* by community banks between 2008 and 2014 was equal to 11.5 percent of the offices they operated in 2008,

Map 2



compared with 9.5 percent for noncommunity banks. The chart also shows that the number of offices **closed** by community banks during this period was equal to 13 percent of the offices they operated in 2008, compared with 17.3 percent for noncommunity banks. This comparison is consistent with the notion that community banks remain more reliant on physical banking offices than do noncommunity banks.

Chart 19 also shows that the total number of community bank offices declined by 8.8 percent between 2008 and 2014, compared with a decline of just 1.9 percent for noncommunity banks. All of this differential in the growth rate for banking offices between community and noncommunity banks can be accounted for by the net transfer of offices between the two groups as a result of failures, mergers, branch sales, or changes in the size or structure of the institution. While previous research has shown that nearly two-thirds of community banks (and

therefore their banking offices) that fail or merge are acquired by other community banks, this percentage declines with the size of the institution.<sup>34</sup> Between 2003 and 2013, some 85 percent of community banks with assets less than \$100 million were acquired by other community banks, compared with just 10 percent of community banks with assets between \$1 billion and \$10 billion.

### Conclusion

This paper chronicles the historical evolution of the banking industry, focusing on the physical banking offices operated by federally insured banks and thrifts. The number of U.S. banking offices has generally grown with population in recent decades, reaching an all-time peak as recently as 2009. There has also been considerable cyclical in the number of offices that

<sup>34</sup> Backup and Brown, "Community Banks Remain Resilient Amid Industry Consolidation," pp. 40–41.

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has coincided with banking crises that occurred in the late 1980s and again in the late 2000s. Geographic variation in office growth over time appears to be associated with differences in population growth and with the varying regional effects of legislative changes that have relaxed or eliminated restrictions on branch banking and interstate banking. New technologies introduced since at least the 1970s have expanded the number of ways that customers can interact with their bank. Yet surveys continue to show that visiting a teller continues to be the most common way for households to access their accounts. Banking offices remain prevalent. The total per capita density of banking offices in 2014 was higher than in any year before 1977, and the density of banking offices in rural and micropolitan counties has declined very little over the past 25 years.

More detailed office data available for the past seven years show that, although FDIC-insured institutions have opened and closed thousands of banking offices since 2008, the number of office closings has consistently outpaced openings of new offices since 2010. Over the past seven years, community banks have opened proportionately more offices and closed fewer offices than noncommunity banks. Still, the total number of community bank offices declined more than the number of noncommunity bank offices because of the conversion of charters to noncommunity status caused by failures, mergers, and changes in the size and structure of the institution.

This analysis shows that physical offices remain a vital channel through which FDIC-insured institutions deliver financial services to their customers. New technologies have certainly created convenient new ways for bank customers to conduct business, yet there is little evidence that these new channels have done much to replace traditional brick-and-mortar offices where banking relationships are built. Convenient, online services are here to stay, but as long as personal service and relationships remain important, bankers and their customers will likely continue to do business face-to-face.

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## References

- America's Community Bankers. *Savings Institution Sourcebook*, 1995, Washington, D.C., 1995.
- Anderlik, John M. and Richard D. Cofer Jr. "Long-Term Trends in Rural Depopulation and Their Implications for Community Banks." *FDIC Quarterly*, 8 (2), 2014. [http://fdic.gov/bank/analytical/quarterly/2014\\_vol8\\_2/article2.pdf](http://fdic.gov/bank/analytical/quarterly/2014_vol8_2/article2.pdf)
- Backup, Benjamin R. and Richard A. Brown. "Community Banks Remain Resilient Amid Industry Consolidation," *FDIC Quarterly*, 8 (2), 2014. [https://fdic.gov/bank/analytical/quarterly/2014\\_vol8\\_2/article.pdf](https://fdic.gov/bank/analytical/quarterly/2014_vol8_2/article.pdf)
- Barlow Research Associates Inc. "BOK's Decision to Ditch In-Store Branches Shows Banks' Predicament," November 2014.
- Breitenstein, Eric C., Karyen Chu, Kathy Kalser, and Eric W. Robbins. "Minority Depository Institutions: Structure, Performance, and Social Impact," *FDIC Quarterly*, 8, (3), 2014. [https://fdic.gov/bank/analytical/quarterly/2014\\_vol8\\_3/mdi\\_study.pdf](https://fdic.gov/bank/analytical/quarterly/2014_vol8_3/mdi_study.pdf)
- Durkin, Thomas A. "Credit Cards: Use and Consumer Attitudes, 1970–2000," *Federal Reserve Bulletin*, September 2000. <http://www.federalreserve.gov/pubs/bulletin/2000/0900lead.pdf>
- Ergungor, Ozgur Emre. "Bank Branch Presence and Access to Credit in Low- to Moderate-Income Neighborhoods," *Journal of Money, Credit and Banking*, Vol. 42, no. 7 (October 2010).
- Federal Deposit Insurance Corporation. *2013 FDIC National Survey of Unbanked and Underbanked Households*, Washington, D.C., October 2014. <https://fdic.gov/householdsurvey/2013report.pdf>
- Federal Deposit Insurance Corporation. *FDIC Community Banking Study*, Washington, D.C., December 2012. <https://www.fdic.gov/regulations/resources/cbi/report/cbi-full.pdf>
- Federal Deposit Insurance Corporation. *Historical Statistics on Banking*, <https://www2.fdic.gov/hsob/>
- Federal Deposit Insurance Corporation. *History of the Eighties—Lessons For The Future*, 1, Washington, D.C., 1997. <https://www.fdic.gov/bank/historical/history/vol1.html>
- Federal Reserve System, "The 2013 Federal Reserve Payments Study—Summary Report and Initial Data Release," 2013, Revised July 2014. [http://www.frbservices.org/files/communications/pdf/general/2013\\_fed\\_res\\_paymt\\_study\\_summary\\_rpt.pdf](http://www.frbservices.org/files/communications/pdf/general/2013_fed_res_paymt_study_summary_rpt.pdf)
- Financial Management Solutions Inc. "2013 FMSI Teller Line Study," 2013. N.P. <http://www.fmsi.com/fullpanel/uploads/files/2013-fmsi-teller-line-study-white-paper-00001.pdf>
- Fox, Susannah. "51% of U.S. Adults Bank Online," Pew Research Center, August 7, 2013. [http://www.pewinternet.org/files/old-media/Files/Reports/2013/PIP\\_OnlineBanking.pdf](http://www.pewinternet.org/files/old-media/Files/Reports/2013/PIP_OnlineBanking.pdf)

- Hayashi, Fumiko, Richard Sullivan, and Stuart E. Weiner. "A Guide to the ATM and Debit Card Industry," *Federal Reserve Bank of Kansas City*, 2003. <http://www.kc.frb.org/publicat/psr/bksjournalarticles/atmpaper.pdf>
- Kahn, Chris. "March 2014 Financial Security Survey," BankRate.com (2014), N.P., <http://www.bankrate.com/finance/consumer-index/financial-security-charts-0314.aspx>
- Ma, Jason. "Wells Fargo Mulls Fewer Branches as Rivals Cut Back," *Investor's Business Daily*, March 7, 2012.
- McLaughlin, Susan. "The Impact of Interstate Banking and Branching Reform: Evidence from the States," *Current Issues in Economics and Finance*, 1 (2), 1995. [http://www.newyorkfed.org/research/current\\_issues/ci1-2.pdf](http://www.newyorkfed.org/research/current_issues/ci1-2.pdf)
- Mengle, David L. "The Case for Interstate Branch Banking," *Economic Review*, November/December 1990. [https://www.richmondfed.org/publications/research/economic\\_review/1990/pdf/er760601.pdf](https://www.richmondfed.org/publications/research/economic_review/1990/pdf/er760601.pdf)
- National ATM Council, Inc. "U.S. ATM Industry," N.P., N.D., <http://natmc.org/documents/2012/10/about-the-atm-industry.pdf>
- Rehm, B.A. "Colorado Ready to Finally Allow Branch Banking." *American Banker* (May 10, 1991).
- Retail Banking Strategies*. "US Bank Excels in In-Store Banking," February 2010.
- Strahan, Philip E. and Jith Jayaratne. "The Benefits of Branching Deregulation," *Economic Policy Review*, 3 (4), 1997. <http://www.newyorkfed.org/research/epr/97v03n4/9712jaya.pdf>
- United States Savings and Loan League. *Savings and Loan Fact Book*, 1971, Chicago, IL, 1971, and *Savings and Loan Fact Book*, 1976, Chicago, IL, 1976.
- Williams, Christopher A. "Banks Go Shopping for Customers," *The Regional Economist*, October 1997, N.P. <https://www.stlouisfed.org/publications/re/articles/?id=1789>