Community Banking and the Community Reinvestment Act

Loretta J. Mester
President and Chief Executive Officer
Federal Reserve Bank of Cleveland

Community Banking in the 21st Century Research and Policy Conference
Federal Reserve Bank of St. Louis
St. Louis, MO

October 3, 2018

Introduction

I thank President Jim Bullard and the Federal Reserve Bank of St. Louis for inviting me to present the opening keynote address at the 2018 Conference on Community Banking in the 21st Century. This is the sixth conference in this important series sponsored by the Fed, the Conference of State Bank Supervisors, and the Federal Deposit Insurance Corporation (FDIC). As you look at the agenda, you'll see that it is quite distinct from other conferences in mixing together researchers, practitioners, regulators, and policymakers. I am a big proponent of the thesis that examining issues from diverse perspectives and discussing those perspectives yields better policy and regulatory decisions. So I am very much looking forward to the conversations we will have over the next two days about the future of community banking. Today, I will focus the bulk of my remarks on the efforts being undertaken to modernize the Community Reinvestment Act. The views I'll present are my own and not necessarily those of the Federal Reserve System or my colleagues on the Federal Open Market Committee.

Banking is on a lot of people's minds these days. Last month marked the 10-year anniversary of the failure of Lehman Brothers, a watershed moment at the start of the global financial crisis. It's hard to have lived through the crisis and not been changed by it. Researchers had to rethink their well-established theories of how financial markets and institutions actually operate; they had to identify the deficiencies in their models and poor inferences from empirical analyses. Policymakers and regulators had to rethink the effectiveness of banking regulation and supervision in ensuring the stability of the financial system as a whole; their eyes were opened to the inter-connectedness and complexity of the global financial system and its regulations. Bankers had to take stock of how they monitored the risks they were taking and whether they had sufficient capital and liquidity to weather what could be unexpectedly deep shocks.

Much has changed over the past 10 years. Credit is generally available to financially healthy borrowers; the financial system is now holding higher levels of capital and liquidity; credit quality is higher; institutions and supervisors have improved their monitoring of risk within institutions; and policymakers are now working to identify emerging risks across the financial sector as a whole. Some of these improvements were mandated by regulation, but others were undertaken by bankers themselves, having seen the damage that can be caused by not fully understanding the risks being taken. I think it would be a mistake to turn back the clock and unwind many of the important steps taken since the financial crisis to improve financial system resiliency. At the same time, I support the efforts that are now underway to better align regulation and supervisory oversight with where the potential systemic risks lie, including proposals to make regulation less burdensome on community banks in the U.S. Better aligning our regulation and supervision with the risks imposed should allow for simplifications without sacrificing safety, soundness, and stability. As we strive to make our regulations and supervision more effective and efficient, we must not forget the important lesson that maintaining a resilient financial system is necessary for a healthy economy.

Community Banks Are Trusted

Saying that a healthy economy depends on a resilient financial system may seem like an obvious statement for those in this room. But during the financial crisis, many people lost faith that the U.S. banking system could deliver any benefits. The reputation of the financial industry and its regulators was decidedly tarnished, some say deservedly so. But remarkably, the public did not lose faith in their local banks. According to a survey published by the business schools at the University of Chicago and Northwestern University, the public has put and continues to put more trust in their local banks than in nationwide banks, the stock market, or mutual funds.[1] I believe this is because the public understands that community banks are important to the economic vitality of households, small businesses, and

[1] The University of Chicago's Booth School and Northwestern University's Kellogg School publish the Financial Trust Index, which is based on an annual survey of a representative sample of about 1,000 American households. The 2015 results (wave 24) give trust by bank category. I thank Professor Luigi Zingales at the University of Chicago for providing the updated results for 2017. In the 2017 survey, on a scale from 1 to 5, where 1 means "I do not trust them at all" and 5 means "I trust them completely," the average response was 3.6 for local banks, 3.0 for national banks, 2.7 for the stock market, and 2.9 for mutual funds.

neighborhoods.[2] Before turning to the Community Reinvestment Act, let me say a few words about the benefits conveyed by community banks.

Community Banks Play an Important Role in the Economy but Face Challenges

Banks provide funding to creditworthy businesses and households. They offer customers methods for saving and making payments. They help people and firms manage their financial affairs. Community banks, in particular, play a crucial role in their local economies. In many small towns and rural areas, financial service providers are very limited except for community banks.[3] By investing in households and neighborhoods, they help promote economic prosperity in local communities. Community banks have been and continue to be an important source of credit to small businesses, which play an important role in the U.S. economy. In fact, three-quarters of U.S. businesses have fewer than 10 employees, and while larger businesses employ the most people, over a quarter of U.S. private-sector jobs are at firms with fewer than 50 employees.[4] Because small businesses tend to have less available hard quantitative information, like audited financial statements, on which to make credit decisions, they have more limited access to credit from large banks or capital markets. Community banks fill that void.

Research has documented that community banks have had some advantages over larger banks in extending loans to smaller firms for which public information is less available. Being local, community banks can forge relationships with their customers. These relationships help community banks assess the creditworthiness of smaller borrowers. According to the Federal Reserve Banks' Small Business Credit

[2] The Federal Reserve classifies banking organizations with $10 billion or less in assets as community banks. Other analysts define community banks as banks with assets of $1 billion or less. The FDIC uses a larger set of criteria (see FDIC, 2012).

[3] See Federal Reserve Bank of Kansas City (2003).

[4] These data are from Supplemental Tables F and G of the National Business Employment Dynamics Data, U.S. Bureau of Labor Statistics. See Mester (2016) for further discussion of the role of small businesses in the economy.

Survey, banks remain the most common source of financing for small businesses.[5] Community banks account for about half of small-business bank lending in the U.S., and the Fed's survey indicates that small businesses are more satisfied with their credit experience at small banks than at large banks or online lenders.[6] And because they tend to finance themselves with core deposits and are less reliant on volatile short-term funding sources, community banks are better able to continue to lend to their customers through times of adverse financial conditions.[7] So small banks offer a service that allows borrowers to weather turbulent times.

Despite the benefits provided by community banks, they are facing some challenges. First, the banking industry has been consolidating. Over the past two decades, the number of banking organizations has fallen from nearly 9,000 institutions to about 5,000, and the number of community banks, especially small community banks, has fallen as well.[8] There are now about 1,200 banking organizations with assets of $100 million or less, down from about 4,000 two decades ago. At the same time, banks are getting larger. There are nearly 30 banking organizations with $100 billion or more in assets, compared with fewer than 20 two decades ago, and the share of total industry assets held by these large institutions has risen from 43 percent to nearly 70 percent.

The community bankers I speak with regularly report that they are facing higher costs of technology and increased regulatory compliance burdens. These reports accord with the data in the national survey

[5] Federal Reserve Banks (2017), page 14.

[6] Federal Reserve System and Conference of State Bank Supervisors (2017), Table 5, and Federal Reserve Banks (2017), pages 14 and 17. Eighty percent of respondents reported being satisfied with their credit experience at small banks, compared with 78 percent at credit unions, 77 percent at community development financial institutions, 61 percent at large banks, and 46 percent at online lenders.

[7] See Berlin and Mester (1999) and Berger, Bouwman, and Kim (2017).

[8] These data are compiled from the Federal Deposit Insurance Corporation Community Banking Study Reference Data. A banking organization is defined as an independent bank or a top-tier bank holding company, with assets consolidated across all constituent subsidiaries. All dollar figures are adjusted for inflation and in 2017 dollars. McCord and Prescott (2014) summarize the changes in the size distribution of banks and discuss some of the causes of the changes.

conducted in association with this conference.[9] In addition, large banks, fintech companies, and other nonbank providers of bank services have entered local markets. Developments suggest that the advantages community banks have had in offering relationship lending may be shrinking over time.[10] Automated lending technologies, such as small-business credit scoring and data-modeling techniques, have allowed larger banks to increase their share of small-business lending, and in recent years, small businesses have increasingly been turning to larger banks for funding. New technologies, including online lending platforms, have also allowed nonbank alternative lenders to increase their share of small-business lending.[11] The Federal Reserve Banks' survey indicates that the smaller small businesses (those with revenues of $1 million or less) frequently turn to online lenders or other nonbank sources for credit, even though they report less satisfaction with these lenders.

Some of my own co-authored research has documented that cost considerations may be driving community banks to increase their size.[12] First, the average cost per dollar of assets associated with regulatory compliance and technological change decreases with institutions' asset size; in other words, there are scale economies. Second, larger community banks, those with assets between $1 billion and $10 billion, appear to do a better job capitalizing on their investment opportunities than smaller community banks, and they achieve better financial performance as a result. Given their current portfolios, these larger community banks also appear to have financial incentives to expand further into small-business lending. So we might expect the trend of larger banks providing a larger portion of small-business lending to continue.

[9] See Federal Reserve System and Conference of State Bank Supervisors (2017).

[10] See Hughes, Jagtiani, Mester, and Moon (2018) for a review of this literature.

[11] See the papers by Jagtiani and Lemieux (2016, 2018).

[12] See Hughes, Jagtiani, Mester, and Moon (2018).

From the borrowers' and savers' viewpoint, entry of new players, new technologies, and increased competition can be beneficial. But from community bankers' perspective, these factors present challenges and may spur banks to move into products and services with which they have less experience. They also presents challenges to regulators who typically have less insight into nonbank financial providers, making it more difficult to ensure that the institutions providing these services do so in a safe and sound manner.

In this challenging environment, the Federal Reserve has been working to ensure that our supervisory oversight aligns with potential risks and that we are bringing a cost-benefit perspective to the rules we use to implement regulations. Recently, attention has turned to the Community Reinvestment Act (CRA) and ways we might make its implementation more effective and efficient given the technological and competitive changes affecting the banking environment.

The Community Reinvestment Act Has Had a Positive Effect on Lending in Underserved Areas

In 1977, Congress passed the Community Reinvestment Act to help address concerns about the deterioration in low- and moderate-income neighborhoods throughout the U.S. At the time, many people blamed urban decline on limited credit availability and illegal practices such as redlining. The CRA reaffirmed that insured depository institutions must serve the communities in which they are chartered to do business, helping to ensure equitable access to credit for all individuals and neighborhoods.[13]

The Federal Reserve and the other federal bank supervisors – the Federal Deposit Insurance Corporation (FDIC) and the Office of the Comptroller of the Currency (OCC) – are charged with implementing the act. Regulators periodically review how well a bank is serving the needs in its geographic service area, identified by the bank based on the location of its branches and ATMs and where a substantial portion of

[13] For more on the historical context of the CRA, see Braunstein (2008) and Federal Reserve System (2014).

its loans are. The CRA requires regulators to make public the ratings and written evaluation of the banks' performance on the CRA.

The Fed is deeply committed to ensuring that the goal of the CRA is met: that banks serve their entire community and, in particular, the credit needs in low- and moderate-income areas. The Fed's community development function, which grew out of our responsibilities with respect to the CRA, has been helping to build relationships between financial institutions and community development professionals. One example is the Investment Connection program, developed by the Kansas City Fed, which links community and economic development organizations with CRA-eligible projects with banks seeking such investments.[14] Work is currently underway to expand the program to other regions.

The word "community" is central to the CRA. A body of research has shown that economic opportunity is tied not only to individual circumstances but also to place. Upward mobility – the probability that a child will be better off economically than his or her parents – is dependent not only on the family's characteristics but also on neighborhood characteristics such as neighborhood income, racial integration, the quality of schools, and access to social services. Lack of access to credit has been found to have long-lasting negative effects on a neighborhood's economic health,[15] and a body of evidence indicates that the CRA has provided some tangible benefits to low- and moderate-income neighborhoods, although the magnitude of the effects varies by study.[16]

Because of the CRA, investment in low- and moderate-income areas is a fundamental part of bank portfolios. Evidence suggests that, on the margin, bank lending in these areas is higher than it otherwise

[14] See Mester (2017) for further discussion of the Fed's community development function. Information about Investment Connection is available on the Kansas City Fed's website at https://www.kansascityfed.org/community/investmentconnection.

[15] See Aaronson, Hartley, and Mazumder (2018).

[16] The Chakrabarti, et al. (2009) volume provides a selection of research articles on the effects of the CRA.

would be without the CRA, and that this lending does not appear to be crowding out lending from nonbank lenders, which are not subject to the CRA. There is evidence that CRA assessment areas tend to attract more investment than other comparable areas in a bank's market,[17] although there is some variation across metropolitan statistical areas (MSAs). For example, one study found a positive effect on lending in large MSAs but not in smaller ones. In particular, the study found that the CRA promotes mortgage credit supply to low- and moderate-income borrowers and neighborhoods in large metropolitan areas, particularly at times when merger activity is strong. This suggests that banks pay attention to the CRA's incentives for compliance.[18]

Indeed, one way the CRA has encouraged investment in low- and moderate-income neighborhoods is through the formation of so-called public or community benefit agreements.[19] These have primarily been used by larger banks during a merger application process and involve the banks committing to a significant increase in lending over a period of years after a merger is completed. Such agreements can qualify for CRA credit, and in the view of some advocacy groups, these agreements can meaningfully increase bank branches and lending in the communities.

Another, less direct, way the CRA might increase lending is by creating a positive information externality for other lenders. For example, the study I mentioned which found an increase in mortgage lending also found that in markets with a low volume of home sales, higher levels of CRA lending by banks is associated with higher, not lower, lending by nonbanks, the opposite of crowding-out. It is possible that the higher volume of CRA lending allows other lenders to better judge the credit risk of neighborhoods in

[17] Ding and Nakamura (2017) examine lending patterns in the wake of 2004 revisions to the Philadelphia MSA and find that banks supply more credit in low- and moderate-income census tracts where they receive CRA credit than in those areas where they no longer receive CRA credit as a result of the boundary change. Ringo (2017) finds similar results looking at all boundary changes to MSAs in 2014.

[18] See Bhutta (2011).

[19] See Silver (2018).

which the overall volume of home sales is low. Similarly, CRA lending may pay a future dividend to all lenders to the extent that CRA lending in low- and moderate-income communities allows people and businesses to develop their credit histories, which can then be used by all lenders to make more informed underwriting decisions on loans to these borrowers in the future.[20]

Finally, one might ask whether the increased investment under the CRA is spurring banks to take on riskier loans, which, depending on the degree of risk, might not be a positive. One study did find higher approval rates on mortgage applications in the 1-1/2 year window around banks' CRA exams and elevated delinquency rates on these mortgages, but the estimated effects were moderate.[21] Another study found that while the CRA causes a substantial increase in mortgage lending to low-income borrowers, it does not appear to increase the risk of default on those loans.[22]

So, in my view, the body of evidence suggests that the CRA has had a positive effect on credit availability in low- and moderate-income neighborhoods, thereby supporting economic development in these areas.[23] However, just as technological change, the entry of new types of lenders, industry consolidation, and new techniques for delivering credit and other financial services are all affecting banking, they are also affecting the regulations and how the regulators should go about assessing compliance with the CRA.

The CRA Will Be Modernized to Enhance Its Effectiveness

To ensure that regulations continue to promote the goals for which they were intended, the federal regulatory agencies undertake periodic reviews and offer guidance to bankers in how they assess

---

[20] See Bhutta (2011).

[21] See Agarwal, et al. (2012).

[22] See Ringo (2017).

[23] Not everyone shares this view. See, e.g., Yezer (2017).

compliance.[24] While regulators have offered moderate updates and guidance on the CRA over time, the last time there were substantial revisions to the framework for assessing CRA compliance was in 1995, over 20 years ago.

Earlier this year, the U.S. Department of the Treasury completed a review of the CRA, engaging with a wide variety of stakeholders. The Treasury made some recommendations about how the CRA is administered in order to help ensure that a bank's CRA activities meet the needs of the communities it serves in a safe and sound manner.[25] The OCC, a part of Treasury, has put out an advance notice of proposed rule-making (ANPR) seeking comment on ways to modernize the CRA regulations.[26] The Federal Reserve is also undertaking efforts aimed at ensuring that the CRA regulations continue to meet the goals of the legislation amid the evolving financial services environment.[27] The legislation is and will remain an important piece of the toolkit for ensuring that all communities have fair access to credit.

Assessment areas

An important area of focus is the area over which a bank's CRA compliance is assessed by the banking agencies. I say "important" because, as I've just discussed, CRA activity is higher in areas covered by CRA examinations. So getting the assessment area right will influence the CRA's effectiveness in getting banking services to low- and moderate-income areas.

Currently, the regulations largely use the location of branches and deposit-taking ATMs to determine assessment areas. This made sense when the CRA originally became law because these were the main ways that banks delivered services to the markets in which they operated. Now, with interstate banking

[24] For an example of this with respect to the CRA, see Interagency (2016).

[25] See U.S. Department of the Treasury (2018).

[26] See Office of the Comptroller of the Currency (2018).

[27] See Brainard (2018a and 2018b).

permitted and technological innovations like the internet, banks can serve communities in which they don't necessarily have a branch or ATM, and lending and investment officers can forge relationships at a longer distance than they could before. Indeed, online banks offer services nationwide from one location. Assessing their CRA compliance based on this single location, as is currently done, seems inappropriate.

But for those banks using the traditional model, data and research suggest that branches remain very relevant and the presence of a branch helps ensure that communities receive better banking services. Despite a drop in the number of bank branches during the Great Recession, the number of branches per capita is higher now than it was two decades ago, even in the wake of significant technological advances over that time period.[28] This suggests that bankers themselves see value in their branch networks.

While the recent branch closures have not occurred disproportionately in low- and moderate-income areas,[29] these and rural areas are particularly susceptible to becoming so-called "banking deserts," defined as no banks within 10 miles of populated areas.[30,31] People in low-income tracts are more than twice as likely to live in a banking desert than those in higher-income tracts.[32] And census tracts in which a majority of the population comprises minorities appear to be the most affected.[33] Branch closures do appear to have a serious impact on service in low-income areas. One study found that bank branch closings in the 2000s led to a persistent decline of about 10 percent in local small-business lending, that

---

[28] Based on the FDIC's Historical Statistics on Banking and U.S. Census Bureau data on resident population, the number of branches of commercial banks per 10,000 people was 2.24 in 1997 and 2.43 in 2017. It peaked at 2.73 in 2008.

[29] Morgan, Pinkovskiy, and Yang (2016).

[30] See Silver (2018) and National Community Reinvestment Coalition (2017).

[31] Yezer (2017) points out that the CRA may have inadvertently discouraged the establishment of branches, because physical offices tend to enlarge a bank's assessment area and the requirement for more CRA-related activity.

[32] Morgan, Pinkovskiy, and Yang (2016).

[33] See Nguyen (forthcoming) and National Community Reinvestment Coalition (2017).

is, lending within 6 miles of the closed branch.[34] And this negative effect on lending was found to last up to 6 years. The author estimates that the decline in lending led to a sizable 2 percentage point reduction in local employment growth rates. Another study found that when the proportion of local bank branches belonging to small banks versus large banks increases, there is an economically and statistically significant decline in the proportion of small businesses that feel financially constrained.[35] Results like these point to the importance of continuing to focus on the community aspect of the CRA, even as the definition of assessment area is updated.

Allowing flexibility but being consistent

This discussion of assessment areas points to another way the CRA can be modernized: namely, recognizing that banks come in different sizes, serve areas with different needs, and use different business models. The focus should remain on making the CRA effective. This means tailoring the assessment approach for different kinds of banks and allowing them to meet their CRA obligations in a way that plays to their strengths while best servicing their communities, which can differ in terms of credit needs and opportunities. Clarifying and perhaps expanding the types of lending and services that qualify for CRA credit should also be considered. Incorporating incentives to lend, invest, and provide financial services in areas with the greatest need should be a consideration in modernizing the CRA because, as I previously mentioned, banks appear to respond to incentives in the CRA.

At the same time that they are allowing more flexibility, the rules and the federal banking agencies also need to take a consistent approach, making sure that they set the same expectations and the same examination and rating criteria. Focusing on outcomes rather than process will allow for flexibility and

[34] See Nguyen (forthcoming).

[35] Berger, Bouwman, and Kim (2017).

consistency, and can increase the effectiveness and efficiency of the CRA regulatory framework. Providing better clarity and consistency can yield better CRA outcomes.

Summary

In summary, community banks have earned a high degree of public trust even as faith in other institutions has fallen. But the banking environment is rapidly evolving. Changes in technology and business delivery models, new entrants, and increased competition all present challenges for both community banks and their regulators. But they also provide opportunities. Community banks are a vital source of financial services in local communities and will remain so as they adapt to the changing environment. The Community Reinvestment Act has been an important piece of legislation, helping to ensure that all communities have access to credit, investment, and other banking services, which are so vital to economic development. The Federal Reserve and the other federal banking regulators are seizing the opportunity to update the CRA's regulatory framework so that it remains effective in a changing banking environment. In this effort, the Fed plans to continue its engagement with bankers and other external stakeholders to collect their views. Modernization efforts will also need to be informed by research and practice. I am looking forward to the discussions we'll be having over the next two days as we discuss the future of community banking and its regulation.

References

Aaronson, Daniel, Daniel Hartley, and Bhashkar Mazumder, "The Effects of the 1930s HOLC 'Redlining Maps'," Federal Reserve Bank of Chicago Working Paper No. 2017-12, revised August 2018. (https://www.chicagofed.org/~/media/publications/working-papers/2017/wp2017-12-pdf.pdf)

Agarwal, Sumit, Efraim Benmelech, Nittai Bergman, and Amit Seru, "Did the Community Reinvestment Act (CRA) Lead to Risky Lending?" National Bureau of Economic Research (NBER) Working Paper No. 18609, December 2012.
(http://www.nber.org/papers/w18609)

Berger, Allen N., Christa H.S. Bouwman, and Dasol Kim, "Small Bank Comparative Advantages in Alleviating Financial Constraints and Providing Liquidity Insurance over Time," *Review of Financial Studies* 30, October 2017, pp. 3416-3454.

Berlin, Mitchell, and Loretta J. Mester, "Deposits and Relationship Lending," *Review of Financial Studies* 12, 1999, pp. 579-607.

Bhutta, Neil, "The Community Reinvestment Act and Mortgage Lending to Lower Income Borrowers and Neighborhoods," *The Journal of Law and Economics* 54, November 2011, pp. 953-983.

Brainard, Lael, "Community Development in Baltimore and A Few Observations on Community Reinvestment Act Modernization," remarks at the Federal Reserve Bank of Richmond Baltimore Community Development Gathering, Baltimore, Maryland, April 17, 2018a.
(https://www.federalreserve.gov/newsevents/speech/files/brainard20180417a.pdf)

Brainard, Lael, "Keeping Community at the Heart of the Community Reinvestment Act," remarks at the Association of Neighborhood and Housing Development Eighth Annual Community Development Conference, New York, NY, May 18, 2018b.
(https://www.federalreserve.gov/newsevents/speech/files/brainard20180518a.pdf)

Braunstein, Sandra F., "The Community Reinvestment Act," testimony before the Committee on Financial Services, U.S. House of Representatives, February 13, 2008.
(www.federalreserve.gov/newsevents/testimony/braunstein20080213a.htm)

Chakrabarti, Prabal, David Erickson, Ren S. Essene, Ian Galloway, and John Olson, eds., *Revisiting the CRA: Perspectives on the Future of the Community Reinvestment Act*. A joint publication of the Federal Reserve Banks of Boston and San Francisco, 2009.
(https://community-wealth.org/content/revisiting-cra-perspectives-future-community-reinvestment-act)

Ding, Lei, and Leonard I. Nakamura, "'Don't Know What You Got Till It's Gone' – The Effects of the Community Reinvestment Act (CRA) on Mortgage Lending in the Philadelphia Market," Federal Reserve Bank of Philadelphia Working Paper No. 17-15, June 19, 2017.
(https://www.phil.frb.org/-/media/research-and-data/publications/working-papers/2017/wp17-15.pdf)

Federal Deposit Insurance Corporation, "FDIC Community Banking Study," December 2012.
(https://www.fdic.gov/regulations/resources/cbi/report/cbi-full.pdf).

Federal Deposit Insurance Corporation, *FDIC Community Banking Study Reference Data*.
(https://www.fdic.gov/regulations/resources/cbi/data.html)

Federal Deposit Insurance Corporation, *Historical Statistics on Banking*. (https://www5.fdic.gov/hsob/HSOBRpt.asp).

Federal Reserve Bank of Kansas City, "The Role of Community Banks in the U.S. Economy," Federal Reserve Bank of Kansas City *Economic Review*, Second Quarter 2003, pp. 15-43 (https://www.kansascityfed.org/Publicat/econrev/Pdf/2q03keet.pdf).

Federal Reserve Bank of Kansas City, "Investment Connection," (https://www.kansascityfed.org/community/investmentconnection)

Federal Reserve Banks, "2016 Small Business Credit Survey: Report on Employer Firms," April 2017 (https://www.newyorkfed.org/smallbusiness/small-business-credit-survey-employer-firms-2016)

Federal Reserve System, "Consumer Compliance Outlook: Community Reinvestment Act Special Edition," First Quarter 2014. (https://consumercomplianceoutlook.org/assets/2014/first-quarter/cco_q1_14.pdf?la=en)

Federal Reserve System and Conference of State Bank Supervisors, *Community Banking in the 21st Century*, National Survey, 2017. (https://www.communitybanking.org/~/media/files/CB21pub_2017_BOOK_web.pdf)

Hughes, Joseph P., Julapa Jagtiani, Loretta J. Mester, and Choon-Geol Moon, "Does Scale Matter in Community Bank Performance? Evidence Obtained by Applying Several New Measures of Performance," Federal Reserve Bank of Philadelphia Working Paper No. 18-11, March 2018. (https://www.philadelphiafed.org/-/media/research-and-data/publications/working-papers/2018/wp18-11.pdf)

Interagency (Office of the Comptroller of the Currency, Federal Reserve System, and Federal Deposit Insurance Corporation), "Community Reinvestment Act: Interagency Questions and Answers Regarding Community Reinvestment," *Federal Register*, July 25, 2016. (https://www.gpo.gov/fdsys/pkg/FR-2016-07-25/pdf/2016-16693.pdf)

Jagtiani, Julapa, and Cathy Lemieux, "Small Business Lending After the Financial Crisis: A New Competitive Landscape for Community Banks," Federal Reserve Bank of Chicago *Economic Perspectives* 3, 2016.

Jagtiani, Julapa, and Catharine Lemieux, "The Roles of Alternative Data and Machine Learning in Fintech Lending: Evidence from the LendingClub Consumer Platform," Federal Reserve Bank of Philadelphia Working Paper No. 18-15, April 2018. (https://www.philadelphiafed.org/-/media/research-and-data/publications/working-papers/2018/wp18-15.pdf)

McCord, Roisin, and Edward Simpson Prescott, "The Financial Crisis, the Collapse of Bank Entry, and Changes in the Size Distribution of Banks," Federal Reserve Bank of Richmond *Economic Quarterly* 100, First Quarter 2014, pp. 23-50. (https://www.richmondfed.org/~/media/richmondfedorg/publications/research/economic_quarterly/2014/q1/pdf/prescott.pdf)

Mester, Loretta J., "The National and Regional Economic Outlook and Monetary Policy," remarks at the African American Chamber of Commerce of Western Pennsylvania Annual Business Luncheon, Pittsburgh, PA, November 30, 2016 (https://www.clevelandfed.org/newsroom-and-events/speeches/sp-20161130-the-national-and-regional-economic-outlook-and-monetary-policy.aspx).

Mester, Loretta J., "The Federal Reserve System and Community Development: The Why, The How, and The What," remarks at the 2017 Policy Summit on Housing, Human Capital, and Inequality: Transforming Regional Economies: Growth and Equity through Policy and Practice, Cleveland, OH, June 23, 2017.
(https://www.clevelandfed.org/newsroom-and-events/speeches/sp-20170623-frs-and-community-development.aspx)

Morgan, Donald, Maxim Pinkovskiy, and Bryan Yang, "Banking Deserts, Branch Closings, and Soft Information," Federal Reserve Bank of New York, Liberty Street Economics, March 7, 2016.
(http://libertystreeteconomics.newyorkfed.org/2016/03/banking-deserts-branch-closings-and-soft-information.html)

National Community Reinvestment Coalition, "Bank Branch Closures from 2008-2016: Unequal Impact in America's Heartland," Research Memo, May 8, 2017.
(https://ncrc.org/bank-branch-closures-from-2008-2016-unequal-impact-in-americas-heartland/)

Nguyen, Hoai-Luu, "Are Credit Markets Still Local? Evidence from Bank Branch Closings," *American Economic Journal: Applied* (forthcoming).
(http://faculty.haas.berkeley.edu/hqn/nguyen_branches_20170828.pdf)

Office of the Comptroller of the Currency, "Reforming the Community Reinvestment Act Regulatory Framework," *Federal Register*, September 5, 2018.
(https://www.federalregister.gov/documents/2018/09/05/2018-19169/reforming-the-community-reinvestment-act-regulatory-framework)

Ringo, Daniel, "Mortgage Lending, Default, and the Community Reinvestment Act," manuscript, December 14, 2017.
(https://papers.ssrn.com/abstract=2585215)

Silver, Josh, "The Importance of CRA Assessment Areas and Bank Branches," National Community Reinvestment Coalition, June 12, 2018.
(https://ncrc.org/the-importance-of-cra-assessment-areas-and-bank-branches/)

University of Chicago's Booth School and Northwestern University's Kellogg School, "The Financial Trust Index."
(http://www.financialtrustindex.org/index.htm)

U.S. Census Bureau, Business Dynamics Statistics, Firm Characteristics Data Tables.
(http://www.census.gov/ces/dataproducts/bds/data_firm.html)

U.S. Department of the Treasury, "Community Reinvestment Act – Findings and Recommendations," Memorandum for the Office of the Comptroller of the Currency, the Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corporation, April 3, 2018.
(https://home.treasury.gov/sites/default/files/2018-04/4-3-18%20CRA%20memo.pdf)

Yezer, Anthony, "Commentary: What Can We Learn From Government Attempts to Modify the Allocation of Mortgage and Consumer Credit in the United States?" *Cityscape* 19, 2017, pp. 199-206.
(https://www.huduser.gov/portal/periodicals/cityscpe/vol19num2/ch14.pdf)