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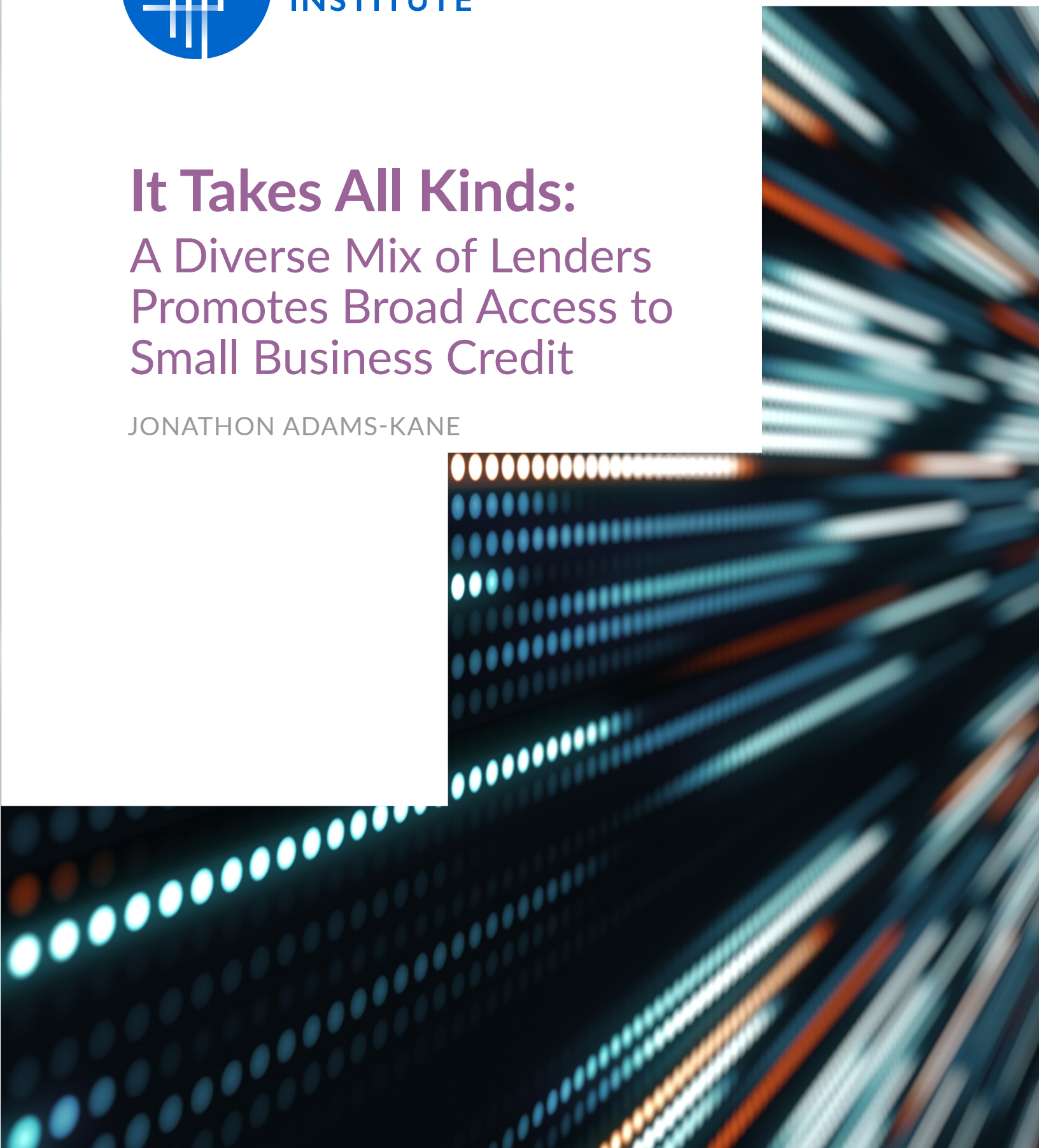
It Takes All Kinds:

A Diverse Mix of Lenders Promotes Broad Access to Small Business Credit

JONATHON ADAMS-KANE



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Jonathon Adams-Kane

KEY MESSAGES

- A diversified lending landscape with a mix of banks and non-bank lenders of different sizes and business models helps to ensure a flexible, resilient supply of business loan products. Legislation and regulatory policies should aim to encourage competition and innovation to support the growth of such diversity.
- Bank business models are changing markedly. Small banks are shifting from issuing small commercial and industrial (C&I) loans to commercial mortgages. Meanwhile, large banks have increased both their large and small C&I lending as well as their commercial mortgage lending.
- The growth in commercial mortgage loan sizes and volumes demonstrates their importance for financing businesses. However, the trend also reflects heightened, possibly unsustainable valuations of the real estate that serves as collateral for these loans. The increased vulnerability of banks and small businesses to changes in property prices deserves continued regulatory scrutiny.
- Consolidation in the banking industry and particularly the growth of large banks is sometimes inappropriately stigmatized as harming small businesses' access to credit. There is no definitive evidence to support this view. The growth of a large bank's size appears unrelated to changes in its small C&I lending.
- Monitoring small business lending remains challenging due to the lack of harmonized data across different types and sizes of lenders. Collecting key metrics more systematically, while carefully weighing the benefits of better data against lenders' reporting costs, would help to illuminate the challenges at play.

INTRODUCTION

Who lends to small businesses, and how is this changing over time? This paper challenges popular answers to this question. First, despite the growing role of non-banks, banks continue to be the most important source of credit for small businesses. Second, small and large banks continue to play important, distinct roles in providing credit to small businesses. Their relative importance depends on the range of banking products and services that small businesses need. Such financing demand reflects the strength and structure of the local economy, and especially real estate valuations, which help collateralize much of small banks' business lending. Also, differences in the evolution of bank business models and new financing innovations are reshaping the menu of financial products that lenders of different sizes can offer small businesses.

Maintaining a diversified banking sector populated with lenders of various sizes is important for ensuring the resilience of the US banking system. Heterogeneity and the adaptability of bank business models to structural changes in local credit demand and changes in regulations are bulwarks of US banking. Different trends in small business lending and in the market shares of small banks across states and regions show how the industry has continued to adapt to changing local conditions.

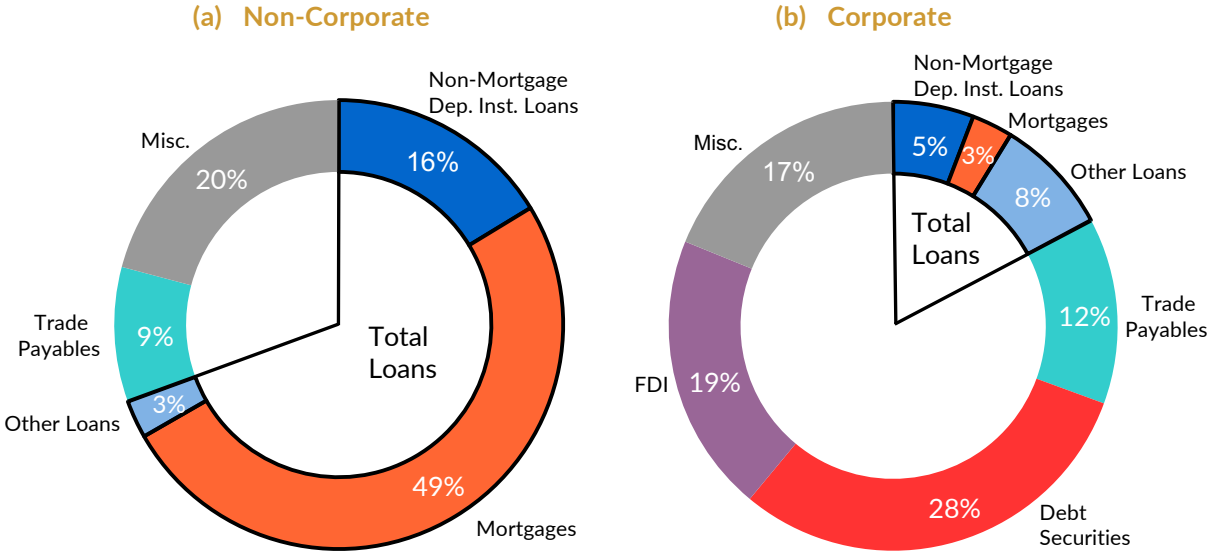
The ongoing recovery in small business lending varies widely from place to place in its strength and timing. The prospects for sustaining the recovery likely depend on the degree to which robust economic fundamentals underpin local real estate valuations that support credit demand. A better understanding of how regional and local economic conditions may differ from national trends, and of how such differences affect local credit needs, would help lenders, businesses, and policy makers prepare for the next downturn.

The remainder of this paper begins by showing how loans, and specifically small business credit, fit into the much broader context of corporate and non-corporate business finance. It then explores how business borrowing has evolved in the sizes of lenders and the different sizes and types of loan products these lenders offer. It then investigates whether a bank's small business lending behavior changes as the bank grows. Finally, it looks at geographic heterogeneity in small business lending trends. Several appendices provide supporting evidence and explore selected technical issues around the measurement of small business lending.

MOTIVATION AND BACKGROUND: SMALL BUSINESS CREDIT IN THE BROADER CONTEXT OF BUSINESS FINANCE

Small and medium-sized enterprises (SMEs) are crucial for economic growth, social mobility, and job creation in the US.[1] The vitality of these firms depends on access to external financing, and this consists mostly of bank loans.[2] Whereas larger companies have access to an array of sources of financing using different capital market instruments from domestic and foreign investors (including flows between subsidiaries within a given multinational group), smaller companies are highly dependent on loans, mainly commercial mortgages and commercial and industrial (C&I) loans.[3] Figure 1 shows that loans make up 69 percent of US non-corporate businesses' liabilities, compared to 17 percent for corporate businesses (as of the end of 2018).

Figure 1: Liabilities of US Non-Financial Businesses



Source: Federal Reserve Z.1 Flow of Funds (December 2018).

Notes: Appendix 1 shows this breakdown in dollar amounts (and the loan share of each group's total liabilities) across time (2001-2018). The Z.1 Flow of Funds data do not break down businesses' mortgage liabilities by property type; they are mainly commercial mortgages (known as non-farm, non-residential), but include multifamily and single-family residential mortgages.

1 For example, the US Small Business Administration (SBA) Office of Advocacy estimates that businesses with fewer than 500 employess created 62 percent of the net new private-sector jobs in the US from 2010 through 2014 (Headd 2017) and employed 47.5 percent of the private workforce as of 2015 (SBA Office of Advocacy 2018 [also includes breakdowns by state and sector]).

2 Appendix 2 compares the percentage of small business loan applicants that apply for loans from various types of lenders and shows that many more borrowers apply to both large and small banks than to other types of lenders. However, it also shows that the market presence of online lenders is growing rapidly.

3 C&I loans are secured or unsecured loans to non-financial companies or individuals used for commercial, industrial, or professional purposes, that are not wholly or substantially secured by real estate. C&I loans generally have terms of one to two years and are often secured by the borrower's cash flow, equipment, or inventory. "Commercial mortgages" are loans secured by non-farm, non-residential properties, excluding loans for construction or land development. Commercial mortgages secured by owner-occupied property are serviced from cash flow from the ongoing business operations of the owner, whereas those secured by non-owner-occupied property are serviced from rental income that ultimately comes from business operations conducted by the tenant. A recent analysis of trends in US banks' commercial real estate lending is provided by Adams-Kane (2018).

Furthermore, the role of loans in financing SMEs has been remarkably stable over the past 20 years. Figure A1, in Appendix 1, shows that for non-financial non-corporate businesses, loans as a share of total liabilities have consistently stayed between 68 percent and 71 percent since the early 2000s (following a general decline over three decades from a peak of more than 93 percent in 1969). By comparison, the share of loans in non-financial corporate balance sheets has been much less stable, fluctuating between 14 percent and 23 percent since the early 2000s. This is because larger businesses have more choices for funding compared with SMEs.[4]

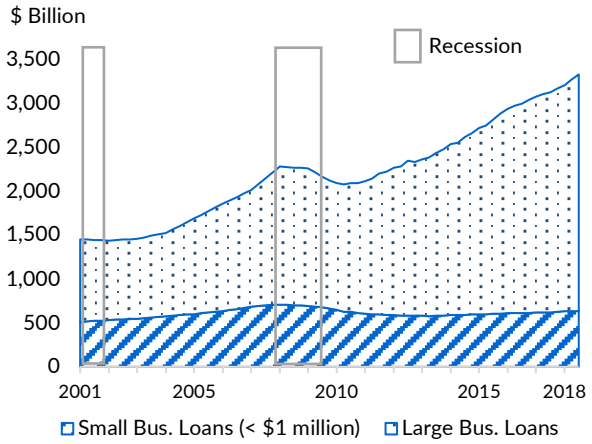
Large and small borrowers also demand loans of differing types and maturities. Such demands change differently over the business cycle. Figure 2a shows that the volume of large business loans, which tend to be shorter-term than small loans, fluctuates more than small loans over the business cycle. Figure 2b shows that this translates to cyclical changes in large banks' share of business lending. This is because large banks tend to make larger, shorter-term loans compared with small banks. Box 1 further explores the evolution of large and small bank lending over several business cycles and the 1990s-era legislative reforms to branching restrictions.

Secular lending trends show that the total volume of small business loans has stayed flat over the last two decades, which contrasts to the rise in large loans. Nevertheless, the patterns of underlying bank lending trends are very different depending on the type of small loan and the size of the lender.

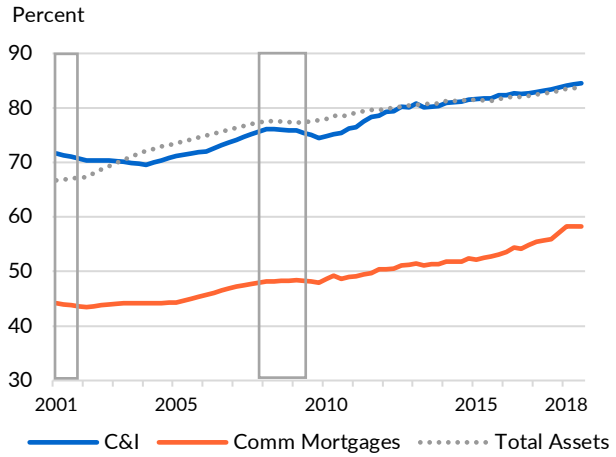
4 Not only do larger borrowers rely more on sources of financing other than loans, but they also borrow more from non-bank lenders and tap additional types of loans such as syndicated loans and private credit. Figure 1 shows that the share of corporate borrowers' loans (and of their liabilities overall) composed of "other loans" is much greater than that of non-corporate borrowers. Some of smaller businesses' mortgages come from non-bank lenders as well, but the Z.1 Flow of Funds data do not provide this breakdown.

Figure 2: Long-Term vs. Cyclical Changes in Business Lending

(a) Business Loans by Loan Size



(b) Large Bank Share by Loan Type



Source: Author's calculations from FDIC Statistics on Depository Institutions (SDI) (quarterly; June 2001–December 2018). Timing of recessions is from the National Bureau of Economic Research.

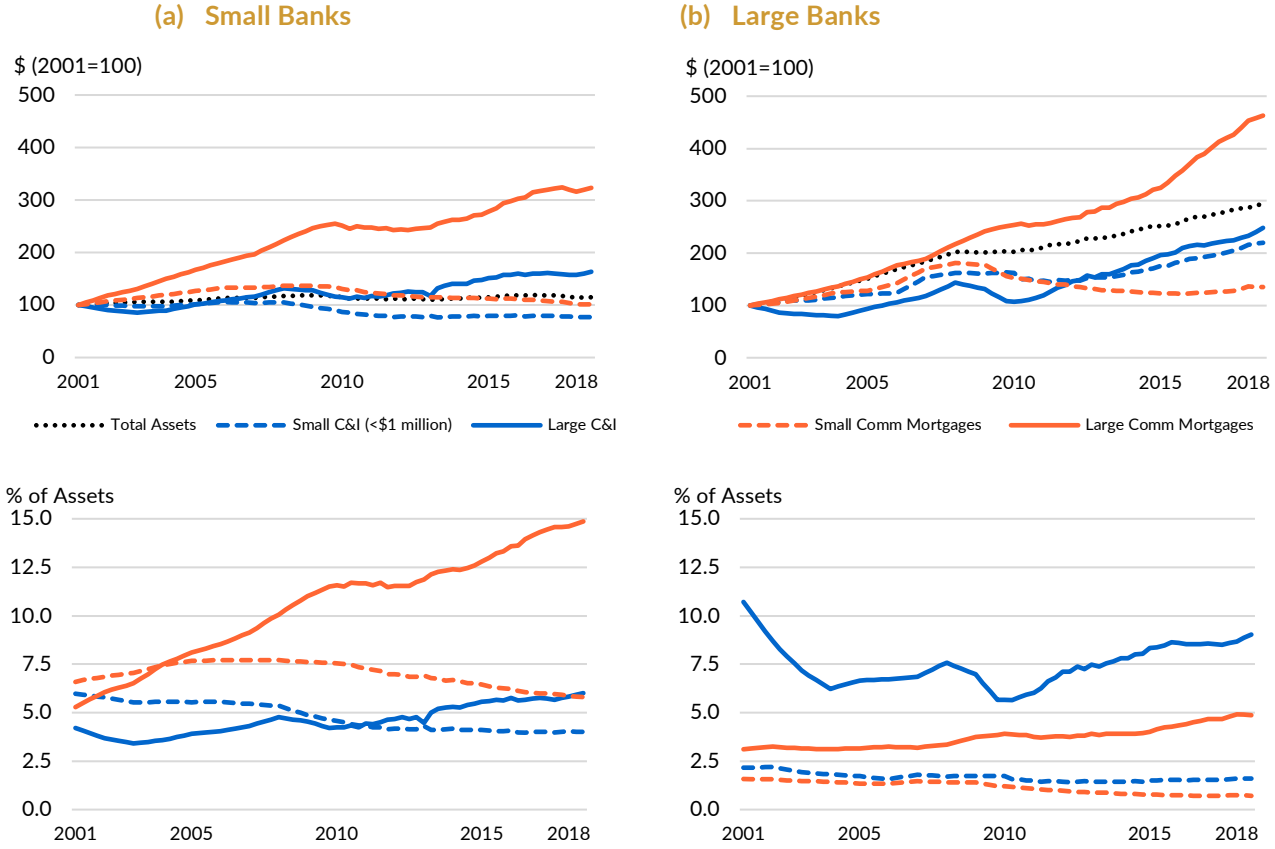
Notes: These data are for all depository institutions, including savings banks as well as commercial banks. Using the total, rather than separating the two types of entities, avoids the problem of mergers between the two types causing shifts of loans from the balance sheet of one group to the other. Such mergers can cause large shifts in both groups' holdings of small C&I loans. Some of the largest of these shifts are special cases in which a large bank group's business credit card business is concentrated on the balance sheet of a savings bank in the group, which is then absorbed by a commercial bank within the group (for example, this occurred in the case of American Express in 2018; see Figure A6 in Appendix 3). Large institutions are defined here as those with more than $10 billion in assets.

CHANGES IN BUSINESS LENDING BY BANK SIZE, LOAN TYPE, AND LOAN SIZE

Historically, business lending by small and large banks has differed in two noticeable ways.[5] First, small banks tend to specialize in small-sized loans more than large banks. Figure 3 shows that C&I loans and commercial mortgages smaller than $1 million currently make up 9.8 percent of small banks' balance sheets, compared with 2.3 percent for large banks (as of the end of 2018). Second, small bank business lending increasingly uses real estate as collateral. Figure 3 shows that commercial mortgages compose 20.7 percent of their total assets, compared to just 5.6 percent of the assets of large banks. However, C&I loans make up similar shares of small and large banks' assets, 10 percent and 10.6 percent, respectively. In addition, small banks do more lending to small businesses using the owners' homes as collateral, although data on these loans is generally lacking. Appendix 3 gives an overview of various data limitations that affect the measurement of small business lending, including the lack of data on homes serving as collateral.

5 Throughout this paper, small banks are defined as those under $10 billion in total assets, and large banks as those above this threshold. This means that the large bank group includes many banks that might commonly be considered "medium-sized," but the entire group is referred to as "large" for the sake of simplicity.

Figure 3: Trends in Business Lending by Bank Size, Loan Type, and Loan Size



Source: Author's calculations from FDIC SDI (quarterly; March 2001–December 2018).

Notes: See notes to Figure 2.

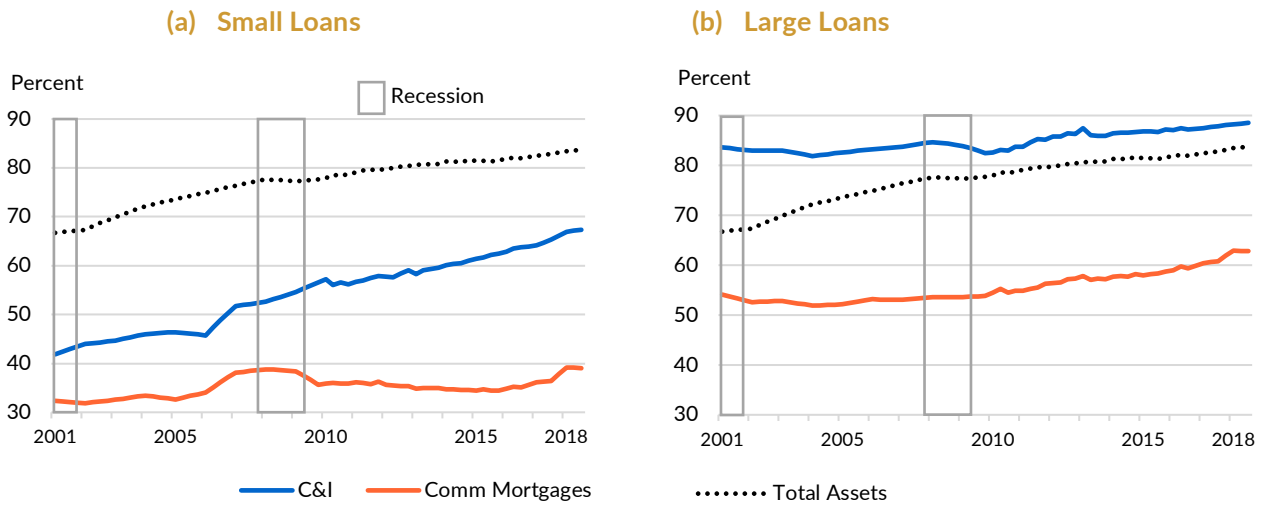
The historical patterns of small versus large bank lending are changing. Figure 3 illustrates that small bank issuance of small loans is waning. It is shrinking as a share of these banks' total assets and also relative to the volumes of small loans by larger banks.

Small banks as a group have shifted to issuing larger C&I loans, but to an even greater extent have increased their issuance of large commercial mortgages. Indeed, commercial mortgage lending has nearly tripled as a share of small banks' total assets. As described in Box 2, the growth of commercial mortgages has partly resulted from rising property prices. This trend signals that heightened valuations may pose a threat to small business access to credit to the extent that prices in some property markets are poised for a correction in the next economic downturn.

Meanwhile, large banks are increasingly issuing small C&I loans. The top-right panel of Figure 3 shows that large banks' balances of small C&I loans have reached an all-time high

in absolute dollar terms.[6] Figure 4a shows that large banks now account for more than two-thirds of all small C&I loans. While large banks' share of small C&I loans is still smaller than their share of the banking system's total assets, the gap has been narrowing. Figure 4b reports the large-bank shares of large loans for comparison.

Figure 4: Large-Bank Share of Business Loans by Loan Size and Loan Type



Source: Author's calculations from FDIC SDI (quarterly; March 2001–December 2018). Timing of recessions is from the National Bureau of Economic Research.

Notes: See notes to Figure 2.

The growing importance of large banks in the banking industry partly explains the shift of some small business lending from small to large banks. Changing business demand for different mixes of bank products and services is a significant part of the explanation, as well. Large and small banks tend to specialize in different products and to offer credit to different types of small businesses.[7]

6 A literature has developed on the question of whether or not regulatory changes that followed the global financial crisis affected lending by banks, either positively or negatively. Attempts to identify a regulatory effect are complicated by the fact that a large number of regulatory changes, government interventions, changes in monetary policy, shocks to supply and demand for different types of loans, shocks to bank balance sheets and non-deposit sources of bank funding, and changes in uncertainty and risk tolerance all occurred around this time. Results in this literature are mixed. For example, Acharya, Berger, and Roman (2018) find evidence that stress-tested banks increased interest rate spreads and contracted their quantities of lending, especially of the riskiest types: large loans to high-risk corporate borrowers, commercial real estate loans, credit cards, and small C&I loans. Bassett and Berrospide (2018), however, focus on estimating the effect of the extra bank capital implied by the stress tests on lending behavior and find no systematic effect; they attribute the slower loan growth at stress-tested banks mainly to differences in credit quality and loan demand. They also find that more capital is associated with more loan growth and note that this is consistent with previous results in the literature. Acharya, Berger, and Roman (2018) provide a comprehensive overview of the theoretical channels through which stress tests may have negative or positive effects on bank lending.

7 Appendix 2 shows that both small and large banks are much more likely to approve small business loan applications from larger and older borrowers than from smaller and younger ones; however, small banks are somewhat more likely than large banks to approve applications from smaller and younger borrowers.

Table 1 shows that large and small banks target different bank products and services to different audiences. Among their offerings:

- Lines of credit are the most popular small business loan product for a majority of large banks but only less than a third of small banks.
- Balloon term loans are the number one product of nearly a third of small banks, compared to just an eighth of large banks.
- More than two-thirds of large banks offer credit cards to small businesses, but barely one-fifth of small banks do.[8]

Overall, although banks of all sizes tend to offer similar sets of small business loan products (apart from credit cards), banks of different sizes specialize within this set. Large banks tend to specialize in shorter-term, more flexible products.

Table 1: Areas of Small Business Loan Product Specialization by Bank Size Group

		Small Banks (%)	Large Banks (%)
LINES OF CREDIT	Offered	94.6	97.9
	No. 1 Product	31.1	52.0
BALLOON TERM LOANS	Offered	84.5	79.0
	No. 1 Product	30.6	12.4
CREDIT CARDS	Offered	21.0	68.8
	No. 1 Product	0.0	*Data unavailable**

Source: FDIC Small Business Lending Survey (FDIC 2018).

Notes: These three loan product categories were selected for the table because they show the greatest differences between small and large banks. The FDIC report provides comparable statistics for amortizing term loans and letters of credit, in which there are generally smaller differences between large and small banks. *The FDIC withheld the percentage of large banks that have credit cards as their number one loan product for small businesses because the number of responses fell below its threshold for protecting the confidentiality of survey respondents' identities.

8 These survey results are for 2015, provided by the FDIC (2018). The ranking of a bank's small business loan products is by dollar volume.

BANK GROWTH AND SMALL BUSINESS LENDING

Despite the paucity of evidence, there is a long-standing belief that bank consolidation may reduce credit availability to small businesses. Such concerns gained prominence in policy discussions in the mid- to late 1990s when consolidation intensified as branching restrictions were lifted. This led to a significant body of research during that period about how bank consolidation might affect the supply of small business loans.

Research results were mixed but often did not support the notion that consolidation is detrimental to small business lending. Some key papers found that mergers were as likely to lead to an increase in banks' small business lending as a decrease.[9] These results made it clear that a static comparison between large and small banks' small business lending behavior will not explain the effects of consolidation over time. This is because bank lending behavior changes over time, as described in Figure 3. The impact that consolidation may have on aggregate lending outcomes depends on how a bank's loan portfolio changes after it absorbs another bank (relative to the combined loan portfolios of the two banks at the time of the merger), as well as how other banks react to the change in market structure.

Nevertheless, 20 years later, policy makers still frequently raise concern. For example, during Federal Reserve Chairman Jerome Powell's recent testimony to Congress, several senators expressed doubts that regulators should approve a merger between two large banks, and at least one senator reasoned that such a merger might hurt small businesses.[10]

There is no significant difference in small C&I lending behavior of large banks that grow more compared with their peers. This is shown in Figure 5, which reports correlations between a bank's asset growth over the last eight years and its change in small C&I lending over the same period (only statistically significant correlations are shown). Appendix 5 shows similar results for the last two economic expansions prior to the current one—large banks' growth in size in the early to mid-2000s was uncorrelated with changes in their small C&I lending, just as in the most recent expansion, and during the 1990s faster-growing large banks increased their small C&I lending relative to their peers.[11]

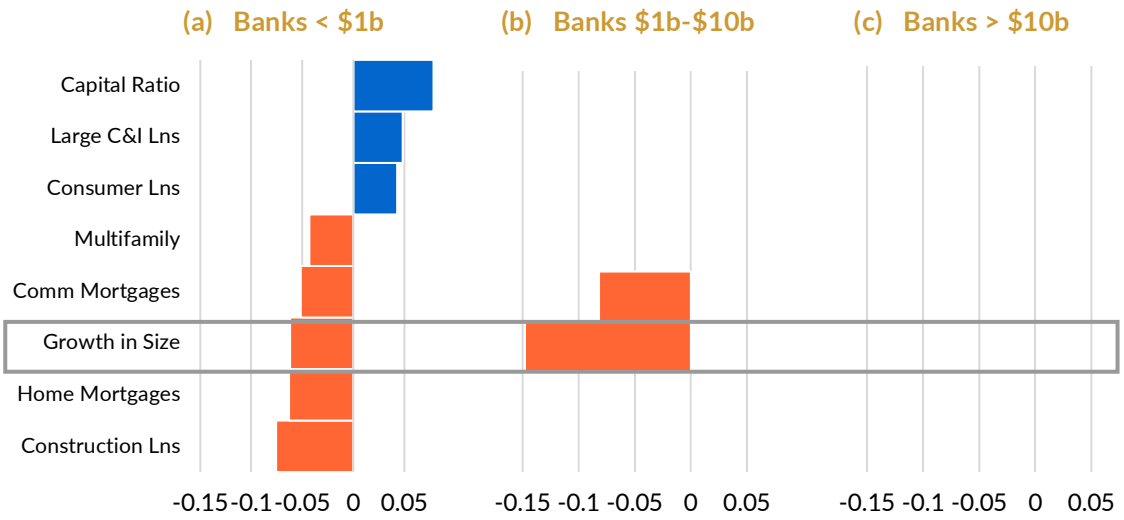
9 For example, Peek and Rosengren (1998) found that merged banks tended to partially revert to the small business portfolio share of the acquirer. And, in roughly half of the mergers (in the mid-1990s), this had the effect of increasing small business lending because the acquirer had a greater small business portfolio share than the target. They point out that not very many mergers fit the stereotype of a large bank that does little small business lending acquiring a small bank (most mergers are between two small banks). Moreover, across bank sizes, acquirer banks on average do more small business lending than non-acquirers of the same size. Berger et al. (1998) found that when a merger does reduce small business lending, much of this effect is offset by other banks in the market that react by taking up the slack.

10 Q&A following Jerome Powell's Semiannual Monetary Policy Report to Congress testimony before the Committee on Banking, Housing, and Urban Affairs, US Senate, Washington, DC, February 26, 2019.

11 Expansions are defined here as periods between recessions as classified by the National Bureau of Economic Research (NBER). The actual period of economic expansion in the 1990s was 1992-2000, but banks did not start reporting small business loans on their call reports until June 1993.

Small banks—especially those in the $1 billion to $10 billion range—that grow faster tend to decrease their small C&I lending relative to slower-growing banks in the same size category. Changes in small banks' small C&I lending also correlate with their initial levels of capitalization and changes in several other types of lending. However, for larger banks, none of these factors are significant.

Figure 5: Correlations with Changes in Small C&I Lending at the Bank Level, 2010-2018



Source: Author's calculations from second-quarter call reports.

Notes: Only correlations that are statistically significant at the 5 percent level or lower are graphed. Bank size and capital ratio are initial 2010 levels, growth in size is the 2010-2018 percent change in a given bank's total assets, and all loan measures are 2010-2018 changes in percent of the bank's total assets.

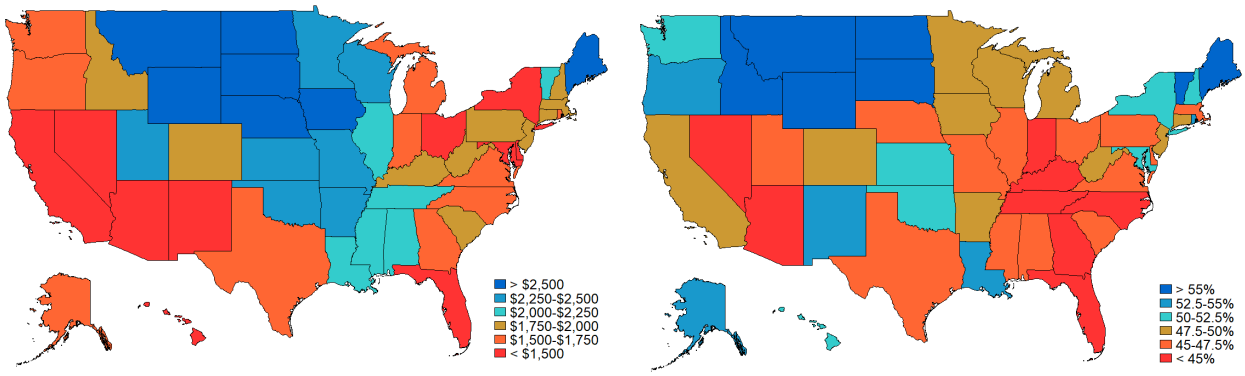
GEOGRAPHIC DISPARITY IN BANKS' SMALL BUSINESS LENDING

An inter-state or inter-regional comparison of the levels of small business bank loans shows that the geographic landscape of US banking is heterogeneous. Figure 6 shows that differences in the prevalence of small businesses in states' economies can explain much, but not all, of the variation in states' levels of small business loans. Moreover, the composition of small business lending varies across regions and states because different types of small businesses have different financing needs.[12] For example, small businesses in industries intensive in capital or land might borrow more heavily (relative to their earnings or number of employees) than businesses in labor-intensive industries.

12 The SBA Office of Advocacy (2018) provides statistics on each state's small business employment by sector.

Figure 6: States' Levels of Small Business Loans Are Related to Local Importance of Small Businesses

(a) Small Business Loans ($ per Capita) (b) Share of Employment by Small Businesses



Source: (a) Author's estimates based on data from US commercial banks' Community Reinvestment Act (CRA) disclosure forms and call reports and state populations from the US Census Bureau; (b) US Small Business Administration 2018 Small Business Profiles for the States and Territories.

Notes: CRA-reporting banks' outstanding loans to borrowers in each state are estimated by scaling each bank's small business loan originations to borrowers in each county (from its CRA disclosure form) by the ratio of that bank's total outstanding small business loans that year (from its call report) to its total, small business loan originations that year (from its CRA disclosure form. Estimated loans to borrowers in each state are then summed across all CRA-reporting banks. Non-CRA-reporting banks' small business loans (from their call reports, which do not include any information about borrower locations) are summed across banks in each state according to the location of bank headquarters. This approach is based on the assumption that banks smaller than the $1.23 billion size threshold for CRA reporting lend mainly in their own states, which is borne out by an examination of the data for slightly larger banks (see Appendix 3). For each state, the estimates for CRA- and non-CRA-reporting banks' small business loans are summed and divided by the state's population. The estimates shown in the figure are for 2017.

Thus, a geographic breakdown of trends in small business lending may be more relevant for establishing banking policy than a geographic breakdown of loan volumes. Even without distinguishing between demand-side and supply-side drivers of changes in lending at the state level, an examination of the changes can be a useful starting point for pinpointing the sources of national-level trends. This may help focus the discussion of potential policies to address concerns about those trends.

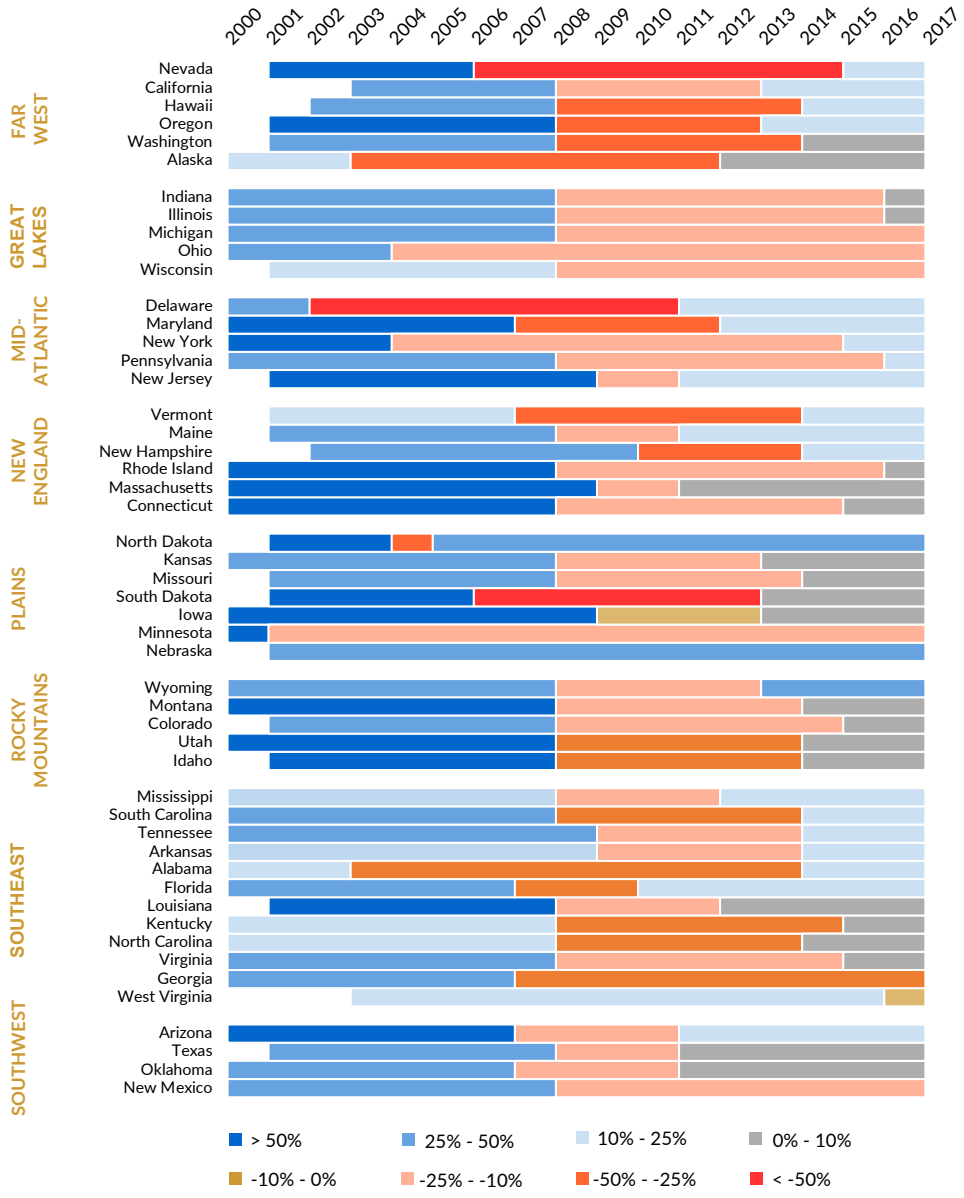
Trends in small business lending differ substantially between various parts of the US. Figure 7 shows that states vary widely in both the magnitude and timing of the post-crisis recovery in small business lending. This was also true of the contraction around the time of the crisis and the preceding boom. One consistent observation is that volatility has been symmetric: states that had larger booms tended to have larger subsequent contractions.

As reported in Figure 8, the magnitude of the recent recovery in small business lending is not significantly correlated with either the preceding boom or bust. It is also uncorrelated with characteristics of states' banking market structures surrounding small business

lending, such as small banks' or local banks' shares of small business lending in the state or the time elapsed since a state lifted restrictions on intrastate branching. Those characteristics of the local banking industry seemed to matter for the previous boom and bust. This change suggests that the ongoing recovery in small business lending may reflect regional economic trends that have shifted substantially since the Great Recession (see Appendix 6 for more interpretative discussion of these correlations). There are significant regional differences. For example, the Great Lakes states have particularly lagged in the recovery.

Figure 7: Timing and Severity of Booms and Busts in Small Business Lending

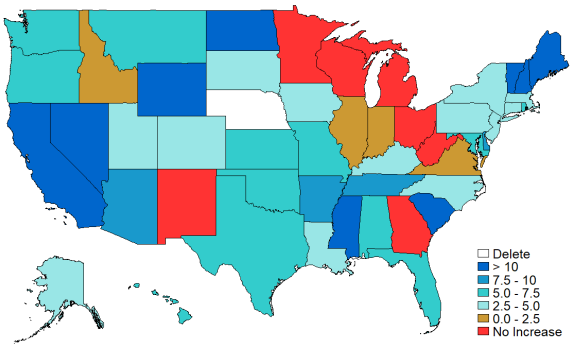
(Cumulative % Changes Between Troughs and Peaks, in $ of Outstanding Loans per Capita)



Source: Author's estimates based on data from US commercial banks' CRA disclosure forms and call reports and state populations from the US Census Bureau.

Notes: See notes to Figure 6. For each state, for the 2000-2017 period, the years of its peak, pre-peak trough, and post-peak trough estimated levels of small business loans (outstanding amounts per capita) are calculated, and the three cumulative changes depicted for each state are those from its pre-peak trough to its peak, its peak to its post-peak trough, and its post-peak trough to 2017, respectively. In some cases, there are fewer than three changes shown; this is because 2017 is either that state's post-peak trough (e.g., West Virginia) or its peak (Nebraska). States are grouped by their Bureau of Economic Analysis region, and within each region, they are sorted by magnitude of post-peak trough-to-2017 recovery, from strongest to weakest (except for states without three distinct periods of change, shown at the bottom of their respective regions).

Figure 8: Post-Crisis Recovery in Small Business Loans (% Increase in $ per Capita, Estimated) by State



Correlation of *Recovery* with*		Significant?
Post-Peak Bust	0.130	No
Post-Peak Boom	0.105	No
Small Bank Share	0.161	No
Local Bank Share	0.061	No
High-CRE Bank Share	0.144	No
Branching Deregulation	0.090	No
Urban	0.229	No

Source: Author's estimates based on data from US commercial banks' CRA disclosure forms and call reports, state populations from the US Census Bureau, and urban shares of state populations from Iowa State University.

Notes: See notes to Figures 6 and 7. For each state, and for each year, the estimates for CRA- and non-CRA-reporting banks' small business loans are summed and divided by the state's population. Each state's percent change (depicted in the map) is from the year in which that state had its post-peak trough to 2017 (each state's peak and post-peak trough years are shown in Figure 7; the change shown in the map is the last change shown in Figure 7 but categorized into smaller bins). In the map, states shown in red are those whose post-peak trough is 2017, i.e., states that had not had a sustained increase in small business lending post-crisis as of 2017. The number of observations is 49 (Nebraska is omitted because its peak year of small business loans per capita was 2017).

*Reported correlations are pairwise Pearson product-moment correlation coefficients. Statistical significance is defined as having a p-value of 0.05 or less (but the closest that any of these variables comes to significance is a p-value of 0.12 in the case of the urban share of the state's population). The pre-beak boom and post-peak bust are the first two changes shown in Figure 7, with the post-peak bust measured in absolute value. Small and local bank shares are the shares of a given state's small business lending in that state's post-peak trough year that come from banks smaller than $10 billion in assets and banks headquartered in the state, respectively. The high commercial real estate (CRE) bank share is the share of the state's small business lending in 2008 that came from banks that exceeded regulatory guidance for CRE exposure (as applied by Adams-Kane [2018], following the OCC, FRB, and FDIC [2006]). The high CRE bank share is included because a bank's level of CRE exposure going into the great financial crisis was the strongest predictor of bank failure in the following years (Cole and White 2012). "Branching deregulation" is the number of years before 2000 that a given state lifted all restrictions on intrastate branching, based on data compiled by Kroszner and Strahan (1999). "Urban" is the urban share of a given state's population as of 2010. Exhaustive (significant) correlations between these variables are given in Appendix 5.

Looking ahead to the next economic downturn, what can be learned to enhance local economies' resilience? The states that experienced the biggest booms in small business lending going into the last crisis had the greatest subsequent busts. Will the same be true for the places that are currently experiencing the greatest increases in small business loan volumes?

The answer depends on the degree to which the current recovery in small business lending in a given place is dominated by loans collateralized by bubbly real estate valuations, versus a recovery underpinned by strong economic fundamentals driving SMEs' demand for a range of loan products from a varied mix of lenders. Credit booms driven by rapid increases in property prices potentially put small banks and the small businesses that depend on them at risk. Policies that strengthen economic fundamentals should enhance resiliency, whereas those that limit competition in the banking industry or incentivize real estate investors to push prices to unsustainable levels will worsen the cycle of booms and busts.

CONCLUSION

This paper has challenged some of the conventional wisdom about the question of whether further bank consolidation may lead to a shortage of credit for small businesses. The overarching message is that diversity in the small business lending ecosystem has been a key advantage for sustaining small businesses' access to a broad range of credit products and services. Such banking industry diversity has allowed small business lending to respond flexibly to secular and cyclical changes in small business credit demand conditions at the local and national level.

Lenders of varying types and sizes specialize in different forms of small business lending because each has an advantage in providing credit with alternative loan products for the credit needs of different business borrowers. The strength and resilience of the US banking system lie in its evolving mix of large and small lenders that offer different combinations of commercial mortgages and C&I loans. This product mix, and their providers, have changed over time, and vary across regions and states. Successfully determining the appropriate product mix depends largely on bank management's judgment about relevant local economic fundamentals. Indeed, the changes in the mix of bank products over time seem to have occurred independently of legislative efforts to reshape the banking industry by blocking mergers or dictating requirements for community lending.

At the same time, the policy objectives of maintaining broad and resilient access to capital are facing significant challenges. A combination of economic fundamentals and real estate valuations drive sharp geographic disparities in business lending trends. These two influences have different policy implications. Economic fundamentals broadly depend on policies that support productivity growth by incentivizing innovation and competition and policies that broaden economic opportunities, such as those promote access to health care and education or improve infrastructure. Of course, these policy aims are beyond the scope of financial regulation.

But it should also be recognized that, with their credit increasingly collateralized by real estate, some small businesses are becoming more vulnerable to the cycle of booms and busts in property markets. Appropriate macroprudential policies might smooth the credit cycle and help to broaden and stabilize small businesses' access to credit by limiting any overreliance on real estate. As a first step, more consistency and standardization of relevant data for determining small business credit access would help regulators monitor lending and forecast credit changes more effectively. Such improvements in data collection would be desirable only if they are implemented without increasing the overall compliance burden faced by smaller lenders. As innovations in lending continue to change the mix of products that banks and non-banks use to offer credit to small businesses, better data reporting requirements must be given high priority to ensure credit access will not be jeopardized by the next downturn in local real estate markets.

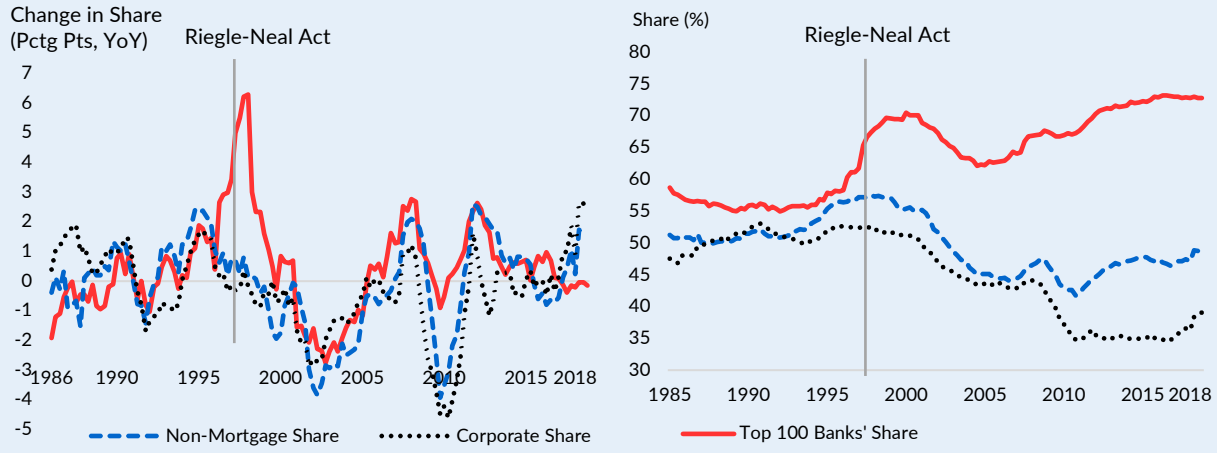
BOX 1

DEMAND-SIDE RELATIONSHIP AMONG BORROWER TYPE, LOAN MATURITY, AND BANK SIZE

Banks of different sizes tend to differ markedly in how much business lending they do relative to the size of their balance sheets, what types and sizes of business loans they specialize in, and what types of borrowers are seeking their loans. This means that changes in loan demand in the specific areas of business lending in which banks concentrate drive changes in observed business lending behavior of small versus large banks. Changes in regulations and in the market structure and competitive landscape in the banking industry might cause small and large banks to adapt their lending behavior differently as well. To understand what is driving changes in aggregate business lending by banks as a whole or banks of different sizes, one must begin to disentangle these various effects.

Looking at total business lending, Figure B1 shows a marked correlation between changes in corporate borrowers' share of the total, the non-mortgage share of the total, and large banks' share of the total portion of business loans held by banks. The notable exception to this pattern was in the late 1990s when a wave of mergers resulted from branching deregulation, especially the Riegle-Neal Act that Congress passed in 1994. The Riegle-Neal Act allowed inter-state acquisitions in 1995 and culminated with the allowance of inter-state mergers in 1997. Large banks' share of total business lending shot up at that time, but today is barely above its 2000 level. In the intervening years, the large bank share has generally fluctuated with changes in the types of borrower (captured here by the corporate vs. non-corporate split) and the types of loans they seek: mortgage vs. non-mortgage, which can also be framed as long-term vs. short-term business loans.

Figure B1: Co-Movement of Corporate, Non-Mortgage, and Large-Bank Shares of Business Loans



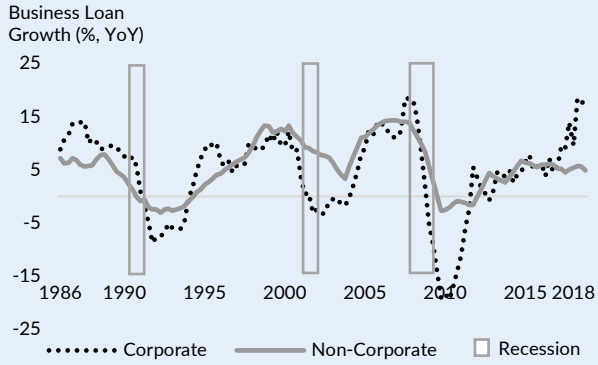
Source: Author's calculations from Federal Reserve Z.1 Flow of Funds and Charge-off and Delinquency Rates on Loans and Leases at Commercial Banks databases (quarterly; March 1985–Dec. 2018).

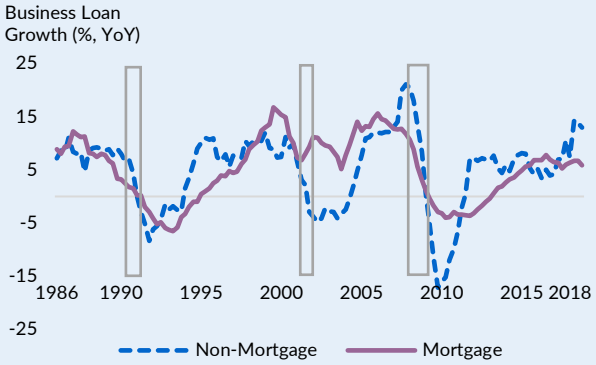
Notes: Corporate vs. non-corporate and mortgage vs. non-mortgage business loans are based on businesses' total loan liabilities from the flow of funds data, so they include non-bank loans. Non-mortgage loans are calculated by subtracting mortgages from total business loans; the result is exactly equivalent to what is called "short-term loans" in the flow of funds. The figures showing bank groups' business loans are limited to C&I and commercial real estate loans on the balance sheets of US commercial banks.

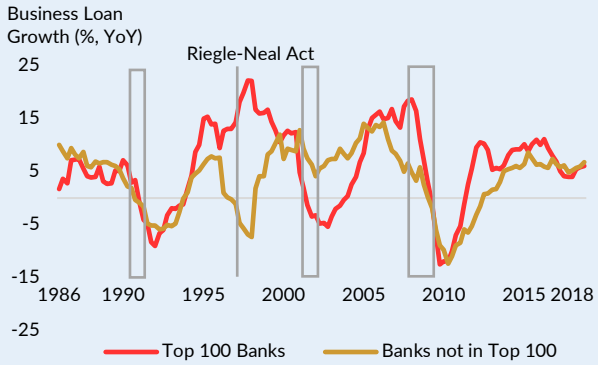
BOX 1 (CONT'D)

These fluctuations correspond to the business cycle. Historically, the corporate, non-mortgage (i.e., short-term), and large-bank share of business loans have all been relatively cyclical (Figure B2). This suggests that the rising large-bank share of loans during the recovery from the Great Financial Crisis is partly explained by the fact that the types of business borrowers and loan products that make up the market for large banks tend to go down disproportionally during recessions and rise disproportionally during recoveries. Much of this is likely because large banks tend to specialize in shorter-term loans. Part of the explanation may be a comparative advantage of large banks in managing and diversifying credit risk, so that they take on riskier business loans of a given type (Appendix 4 shows comparisons of default and charge-off rates), combined with a comparative advantage of smaller banks in real estate lending due to firsthand knowledge of local property markets.

Figure B2: Cyclical Fluctuations in Business Lending Are Mainly in Short-term Loans, to Corporate Borrowers, from Large Banks







Source: Author's calculations from Federal Reserve Z.1 Flow of Funds and Charge-off and Delinquency Rates on Loans and Leases at Commercial Banks databases (quarterly; March 1985–Dec. 2018). Timing of recessions is from the National Bureau of Economic Research.

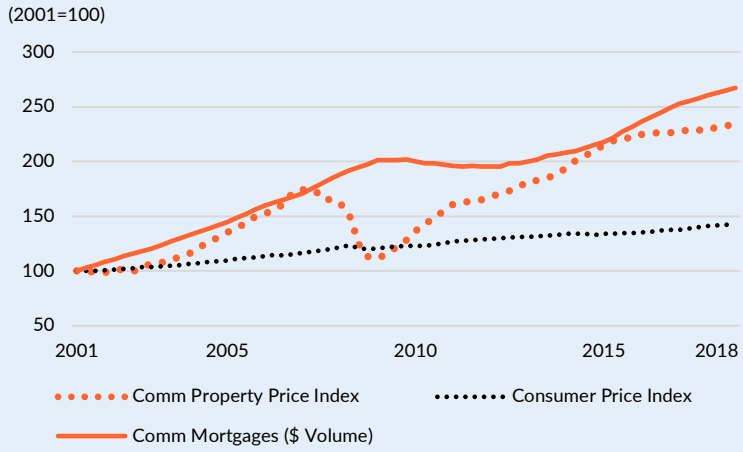
Notes: See notes to Figure 2.

BOX 2

COMMERCIAL MORTGAGE SIZE AND VOLUME ARE PUSHED UP BY VALUATIONS

From the perspective of the resilience of small businesses' access to credit in the next economic downturn, it is important to note that changes in real estate valuations can account for the bulk of the upward secular trend in banks' total dollar volumes of commercial mortgages, as illustrated in Figure B3. Commercial real estate price increases have outstripped general inflation over the past two decades, apart from the years of the Great Recession. Commercial property is the main form of physical collateral for small business loans. The fact that the growth of small business credit appears to go together with what may be an unsustainable rate of appreciation of property prices implies that these valuations may be a key area of vulnerability for small businesses. In turn, CRE valuations may represent a risk for banks, especially those small and medium-sized banks that are highly concentrated in this type of lending.[13]

Figure B3: Commercial Real Estate Valuations and Volumes of Commercial Mortgages vs. General Inflation



Sources: Green Street Advisors (All-Property Commercial Property Price Index), FDIC SDI, and Consumer Price Index from the Organization for Economic Co-operation and Development (provided by the Federal Reserve Bank of St. Louis) (all rebased by the author).

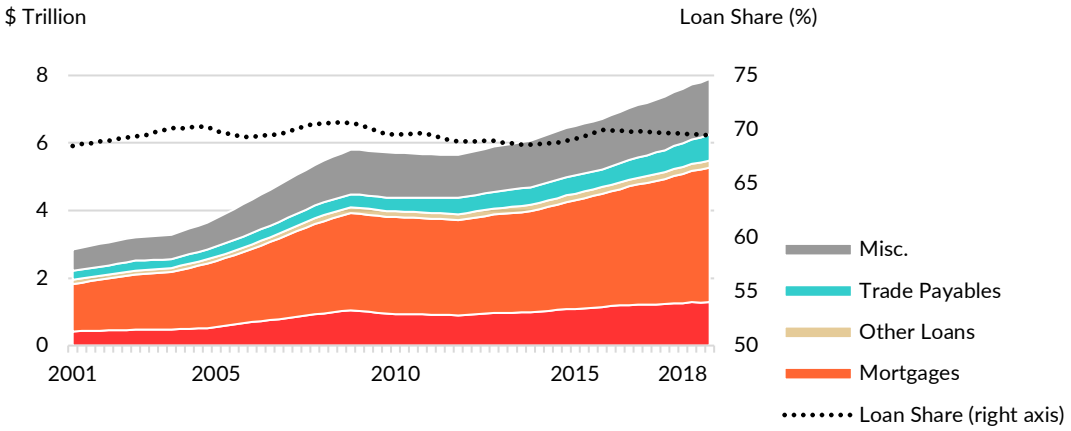
Notes: Here, commercial mortgage volumes are those held by all US depository institutions (i.e., loans held by non-banks are not included).

13 Cole and White (2012) show that concentration in CRE lending was the strongest predictor of bank failure around the time of the great financial crisis.This repeats apattern in banking crises of the 1980s and 1990s. Adams-Kane (2018) analyzes how banks' concentrations in CRE lending have evolved since the crisis.

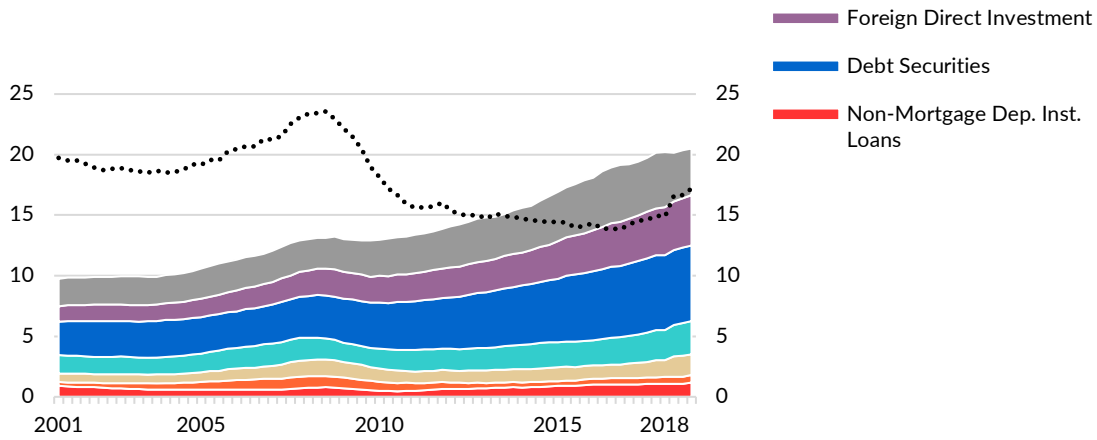
APPENDIX 1: COMPOSITION OF LIABILITIES OF NON-FINANCIAL BUSINESSES OVER TIME

Figure A1: Liabilities of US Non-Financial Businesses

(a) Non-Corporate



(b) Corporate



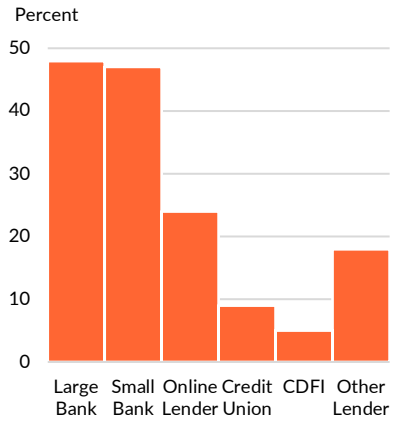
Source: Federal Reserve Z.1 Flow of Funds (quarterly; March 2001–Dec. 2018).

Notes: Non-mortgage depository institution loans to corporate and non-corporate businesses mainly consist of C&I loans.

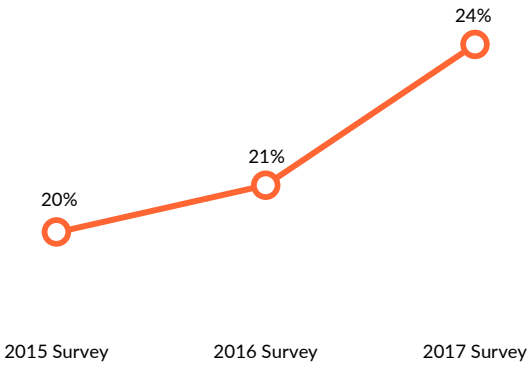
APPENDIX 2: BANKS ARE THE MAIN SOURCE OF FUNDING FOR SMALL BUSINESSES BUT FAVOR LARGER AND OLDER SMALL BUSINESS APPLICANTS

Figure A2: Sources of Credit and Approval Rates for Small Business Loan Applications

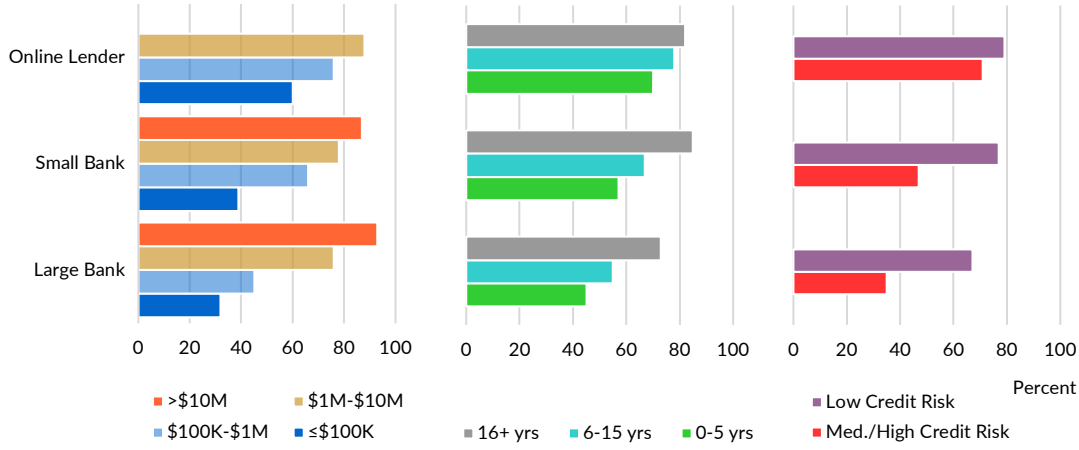
(a) Credit Sources Applied To



(b) Borrowers Who Applied to Online Lenders



(c) Loan Approval Rate by Source and Borrower Size, Age, and Credit Risk



Source: 2017 Small Business Credit Survey: Report on Employer Firms (Federal Reserve System, 2018).

Notes: Panel (a) shows the percentage of surveyed small business applicants for loans/lines of credit/cash advances that applied to a given type of credit source in 2017, following the definitions in the survey (Federal Reserve System 2018). "CDFI" stands for community development financial institution. Panel (b) shows how the percentage of applicants that applied to online lenders has increased over the years since the survey's beginnings. Panel (c) shows the percentage of those applicants whose applications were approved, broken down by the three largest types of credit sources, and by gross annual revenue and age of the firm, for 2017.

APPENDIX 3: STUDIES OF BUSINESS LENDING ARE SUBJECT TO MAJOR DATA LIMITATIONS

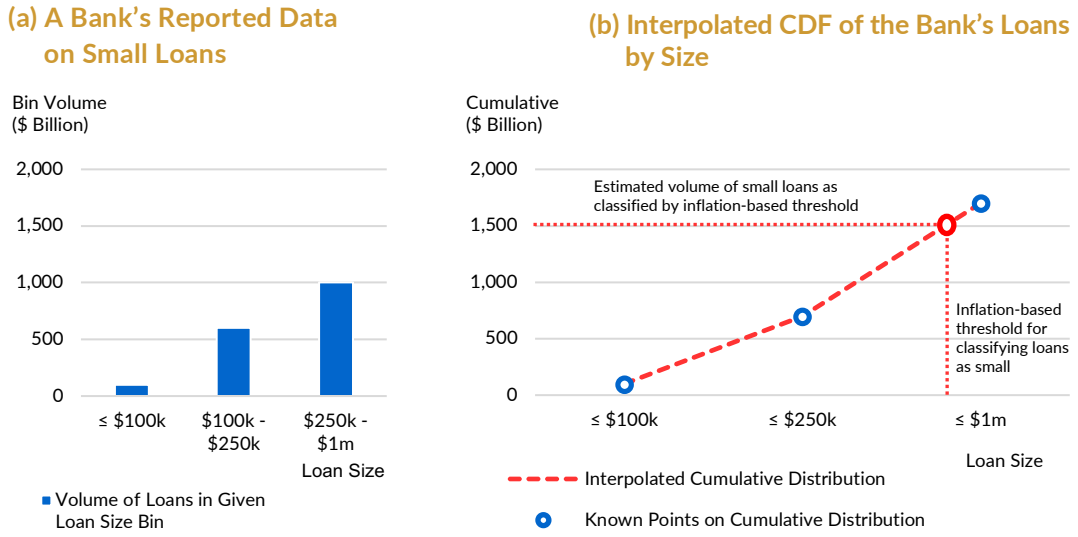
Problems with Measuring Small Business Loans Based on Loan Size: Loan size often defines small business loans, but this method presents two problems. First, some loans that are larger than whatever loan size threshold is chosen may go to small businesses, resulting in understatement of small business loan volumes. The most common loan size threshold is $1 million. Based on a survey of banks, the FDIC (2018) estimates that roughly between one-fifth and one-half of C&I loans of small banks (between $1 billion and $10 billion in assets) above the $1 million threshold were given to small businesses. There is no practical way to adjust for this understatement.

The second problem is that the loan size thresholds used to report small C&I, commercial mortgage, and farm loans in the call reports do not change over time. This means that any time trend in these reported measures of small loan volumes must partly reflect the effects of general price inflation, via the nominal size, costs, and revenue of the businesses that seek loans and the banks that lend to them.

To assess the severity of the inflation problem, the author estimates each bank's cumulative loan volumes at loan size thresholds in between those that are reported, based on the bank's reported data. Then the size threshold for classifying a loan as small is adjusted over time to account for inflation. This is done simply by linear interpolation of the cumulative distribution function (CDF) of loan volumes across loan sizes. An example for an imaginary bank is given in Figure A3 to illustrate the concept. This approach not only has the advantage of being straightforward to implement but also has been shown to be reasonably accurate (at least in the case of interpolating income distributions).[14] Although polynomial-based methods such as cubic spline interpolation could be used to produce a curve of interpolated values, the linear approach is used here partly because it results in more conservative differences between estimated historical volumes of small loans and volumes based on a fixed current-dollar threshold.

14 von Hippel, Hunter, and Drown (2017).

Figure A3: Estimating Volumes of Small C&I Loans Classified by an Inflation-Adjusted Loan Size Threshold



Here, the size threshold applied in each quarter is the current-dollar equivalent of 1 million 2018 dollars, calculated by dividing each quarter's consumer price index (CPI) by the 2018-quarter-4 CPI. Thus, the estimated volume of small C&I loans ($\hat{L}^s$) held by bank i at time t is a weighted average of the bank's volume of C&I loans of loan sizes below \$250,000 ($L^{<\$250k}$) and its volume of C&I loans of loan sizes below \$1 million ($L^{<\$1m}$), where the weights are given by the price level at time t relative to the 2018 price level:

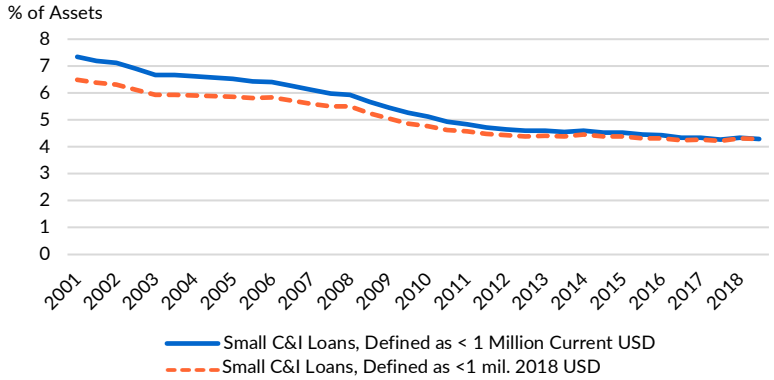
$$\hat{L}_{it}^{s} = \left(1 - \frac{CPI_t}{CPI_{2018q4}}\right)(L_{it}^{<\$250k}) + \frac{CPI_t}{CPI_{2018q4}}(L_{it}^{<\$1m})$$

This estimate of small C&I loan volume is made for each US-chartered commercial bank based on the information in its call report, for each quarter in which the bank reported information on small business loans.[15] Figure A4 shows these estimates aggregated across banks (in two groups according to bank size), together with their total volumes of C&I loans below the unadjusted \$1 million loan size threshold for comparison.

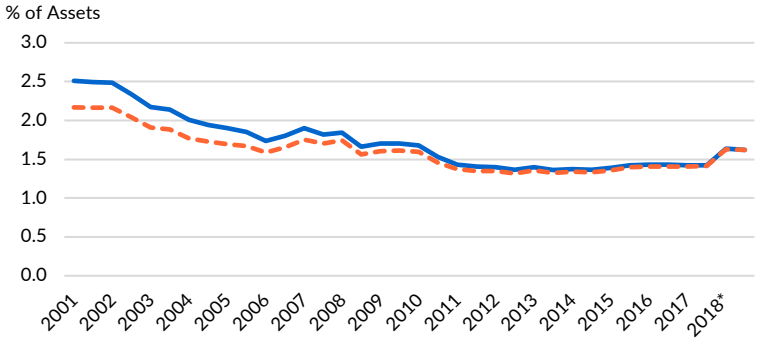
15 From 1993 through 2009, banks reported their small business loans held at the end of the second quarter of each year. From 2010 through 2016, they reported for every quarter, and from 2017 onward, they consistently reported for the second and fourth quarter. The call report includes a question asking whether "all or substantially all" of the bank's C&I loans and commercial mortgages have original amounts below \$100,000; some (small) banks answer yes to this question, in which case the bank is not required to report the exact volumes of its C&I loans and commercial mortgages that fall below the various loan size thresholds. Here, these banks are taken at their word and all their loans are allocated to the smallest (<\$100,000) loan size bin. For these banks, the inflation adjustment of the threshold for classifying loans as small has no effect on their small loan volumes, given that their entire portfolios of business loans are well below whatever threshold is applied.

Figure A4: Small C&I Loan Volumes with and Without Adjusting the Loan Size Threshold for Inflation

(a) Small Banks



(b) Large Banks



Source: Author's estimates based on data from FDIC call reports of commercial banks (June of each year from 2001 through 2009; June and December of each year from 2010 through 2018, during which time more frequent comprehensive reporting of small business loans was in effect) and CPI from the OECD (provided by the Federal Reserve Bank of St. Louis).

Notes: Here, small banks are defined as US commercial banks that have never had more than $10 billion of total assets throughout their history since 1990, and large banks are those that have had more than $10 billion. Size groups are constructed this way so that a bank never switches from one size group to another, making comparisons over time relatively stable. Because banks generally grow over time, size groupings generally match banks' most recent levels of total assets. *In 2018, a large commercial bank (American Express National Bank) absorbed a savings bank as part of an internal reorganization of the bank group; this reorganization raised commercial banks' total small C&I loans by roughly $26 billion (and lowered savings banks' total by the same amount; see Figure A6).

The difference that the adjustment makes is not great. The inflation adjustment to the threshold causes a flattening of the slopes of the time trends of banks' small loans, but the degree of flattening is not dramatic. The main reason why the effect is not greater is that many small loans are under $250,000. Therefore, they are classified as small regardless of any adjustment to the $1 million threshold.

The reasonably small difference induced by adjusting the loan size threshold for defining small business loans is reassuring. It means that the unadjusted small loan volumes reported by banks in their call reports—which in turn form the basis for the FDIC SDI and are also used in the Federal Reserve Board's weekly H.8 estimates—serve as useful proxies for measuring trends in small business lending, at least over short- to medium-term time horizons. In any case, while the inflation adjustment allows an apples-to-apples comparison over time, it does not resolve the problem that any definition of small business loans that is based solely on loan size is best regarded as a somewhat crude proxy for actual lending to small businesses. Some small loans go to large firms and some relatively large loans go to small firms. However, the problem with fixed nominal loan size thresholds illustrated here bears continual monitoring so long as small loans continue to be reported in this way. The exercise here shows one pragmatic approach to addressing the problem. This may be especially useful when studying long-term trends in small business lending.

Incomplete Reporting of Small C&I Loans and Commercial Mortgages: There are several deficiencies and limitations in the data on small business lending reported by banks in their call reports or CRA disclosure forms.

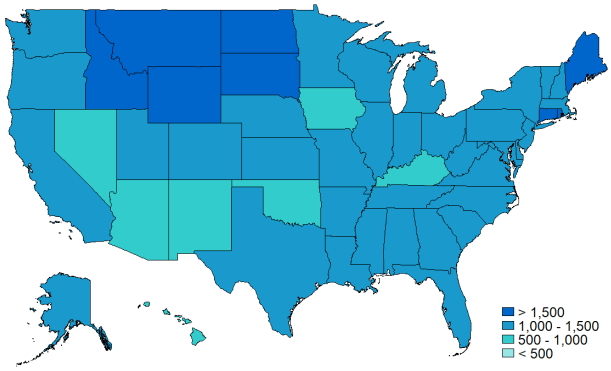
One issue is that the CRA data include loan originations by the borrower's location (at the county level), but only banks above a certain size threshold are required to report these data. The threshold as of the time of writing is $1.284 billion (total assets). The preponderance of banks smaller than this threshold varies widely from one location to another (Figure A5c), and consequently, it is generally meaningless to aggregate the CRA data by the borrower's location and compare these aggregates. This limitation precludes the comparison of lending in geographic units as granular as a county or core-based statistical area, for example.

The approach of this paper to circumvent this problem is to aggregate estimates of CRA-reporting banks' loan amounts (the method used to estimate loan levels from originations is explained in the notes to Figure 6) in each county by state. Then, the author added the comparable loan amounts of non-CRA-reporting banks (from their call reports) headquartered in a given state to that total.

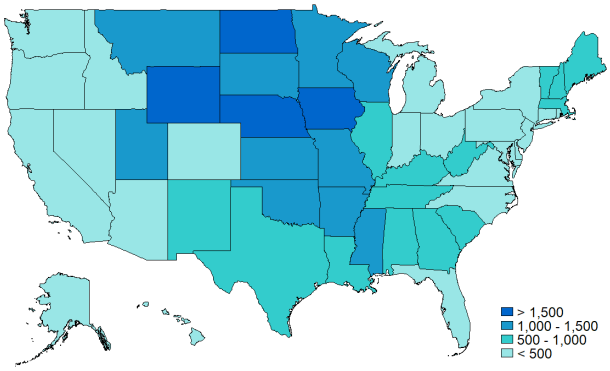
For banks that are just above the threshold for reporting CRA data, and under $1.5 billion in assets, 88 percent of their small business loan originations are in their home state (based on 2017 CRA disclosure forms). Thus, it is reasonable to assume that the bulk of the small business loans of banks that are too small to report CRA data are in their home states. This assumption is made throughout this paper whenever the call report data are combined with the CRA data to estimate small business loans by state. Figure A5 shows the results of these estimates separately by data source (panels [a] and [b]; when combined, these are the estimates used in Figures 6, 7, and 8 in the main text). The figure also illustrates the close relationship between CRA-reporting banks' estimated share of small business loans in each state, the large-bank share, the out-of-state bank share, and the timing of when each state lifted restrictions on intrastate branching.

Figure A5: CRA-reporting vs. Non-CRA-reporting Banks, Small Business Loans by State, 2017

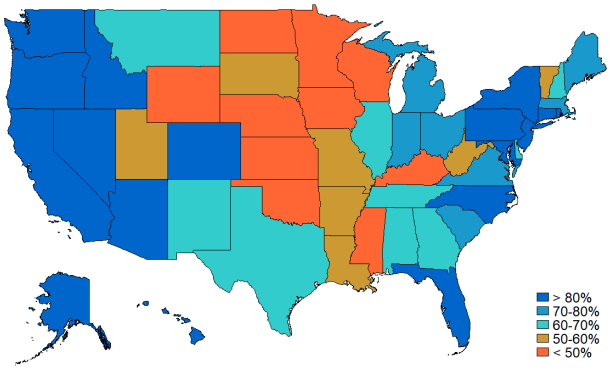
(a) CRA-reporting Banks (Size > $1.23 Billion)
(Loans by Borrower Location, $ per Capita)



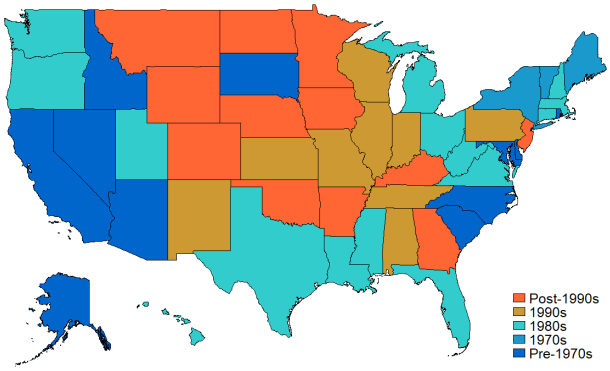
(b) Non-CRA-rep. Banks (Size < $1.23 Billion)
(Loans by Bank HQ Location, $ per Capita)



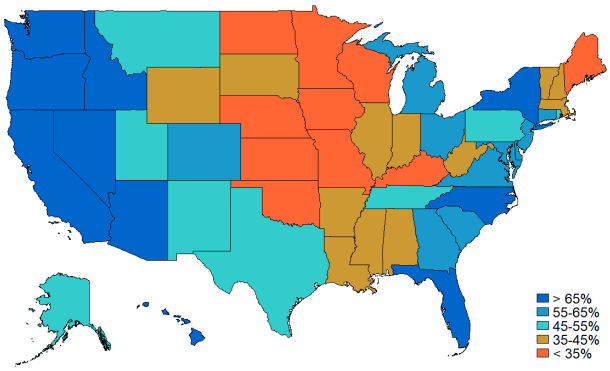
(c) CRA-rep. Banks' Share of Small Bus. Loans



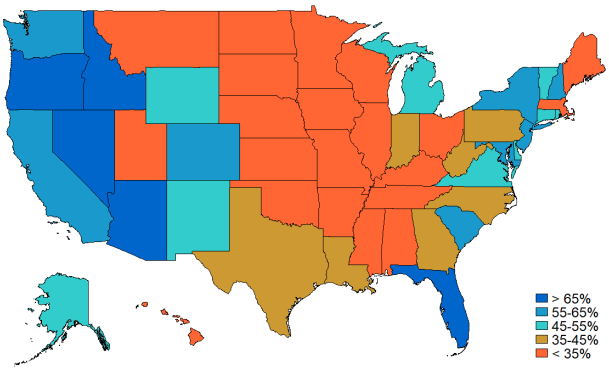
(d) Timing of Intrastate Branching Deregulation



(e) Large Banks' Share of Small Bus. Loans



(f) Out-of-State Banks' Share of Small Bus. Loans



Source: (a)-(c), (e), (f): Author's estimates based on data from US commercial banks' December 2017 CRA disclosure forms and December 2017 call reports. (d): author's calculations based on data compiled by Kroszner and Strahan (1999).

Notes: See notes to Figure 6. Large banks are defined as those that have ever had more than $10 billion in total assets (so banks do not switch between groups as they grow or shrink). Out-of-state banks are defined as those headquartered in another state.

A second issue is changes in the frequency of reporting small business loans in the call reports. From 1993 when call report forms first included the questions on small business loans, through 2009, the data were only reported annually (in each bank's June call report). In 2010, the frequency was increased to quarterly reporting, which made the data more useful for bank researchers and regulators to monitor cyclical and rapidly evolving trends in the small business lending landscape. However, in 2017, the frequency of comprehensive reporting of small business loans was reduced to twice per year (in the June and December call reports). While in general there are good reasons to reduce onerous compliance costs for small banks, estimates of the cost savings from reducing the frequency of this type of reporting are small and should be weighed carefully against the benefits of reporting more frequently.[16]

A third, relatively minor issue is that the call reports of the smallest banks—for 2001-2016 those under $300 million, and from 2017 onward, those under $1 billion—are not required to differentiate between small business loans made to domestic versus foreign addresses.[17] A comparison of the domestic and foreign C&I loans of banks slightly above the cut-off confirms that few banks of this size make any foreign loans. For example, for banks with total assets between $1 billion and $1.1 billion in December 2018, 99.9 percent of their C&I loans were domestic. Throughout the paper, we assumed that banks below the size threshold for differentiating between domestic and foreign loans make only domestic loans, and we included these banks in the analysis.

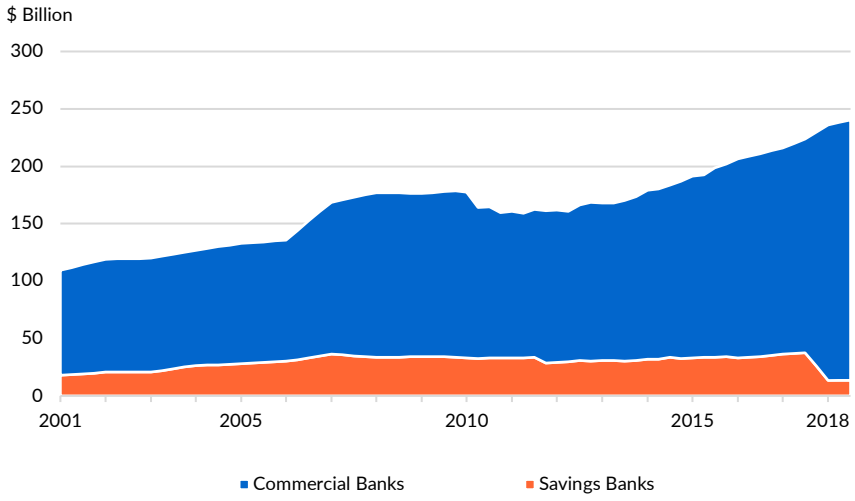
Some Single-Family Home Mortgages are Small Business Loans: The FDIC (2018) found that a significant number of small business loans, especially those of the smallest banks, are backed by the borrower's home as collateral. This means that the lenders only report these loans in their call reports as part of their total single-family home mortgages and they are impossible for researchers to distinguish from other single-family home mortgages. Based on the survey results, the FDIC estimates that for very small banks (with less than $250 million of total assets), small business loans backed by homes are equivalent to 15 percent of their C&I portfolios, but for larger community banks (with total assets between $1 billion and $10 billion), the comparable figure is just 3.1 percent. In total, the FDIC estimates that in 2015 (the year of the survey), more than $18 billion of single-family home mortgages constituted business loans. This missing part of the business loan landscape cannot be accounted for over time or at the bank level based on available data, and this needs to be borne in mind when analyzing trends in small business lending, especially by the smallest banks.

16 For example, the Department of the Treasury, Federal Reserve System, and FDIC (2018) estimate that the latest proposal to reduce the reporting frequency for a number of items on the call reports would save each bank 1.18 hours per quarter.

17 Prior to 2001, the size cut-off for differentiating loans to US and foreign addresses was lower, at $100 million.

Commercial Banks and Savings Banks Have Differences in Data Coverage, Complicating Measurement of Small Business Loans: Some data sources cover only commercial banks and exclude savings banks. For example, savings banks' call reports have only been compiled with those of commercial banks since 2012, so studies based on call report data often exclude savings banks altogether. However, savings banks do some small business lending. Moreover, historically, some large bank groups have included savings banks that handled the bulk of their business credit card lending. In cases when a commercial bank absorbs a savings bank in its group, a significant shift in aggregate measures of commercial banks' small business loans can occur (see Figure A6).

Figure A6: Small C&I Loans by Type of Depository Institution



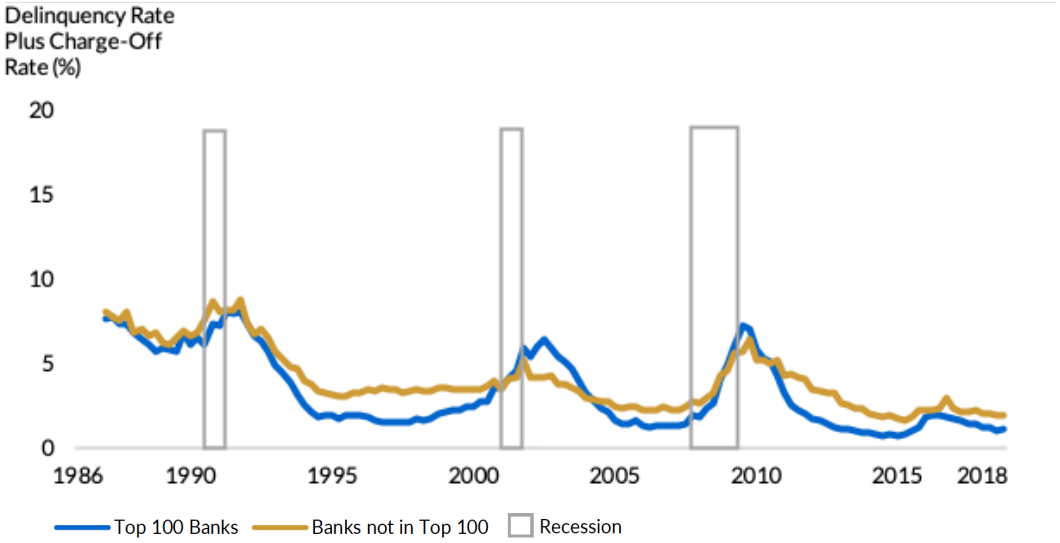
Source: FDIC SDI (quarterly; March 2001–Dec. 2018).

Notes: Small C&I loans are defined here as those originated at amounts less than $1 million.

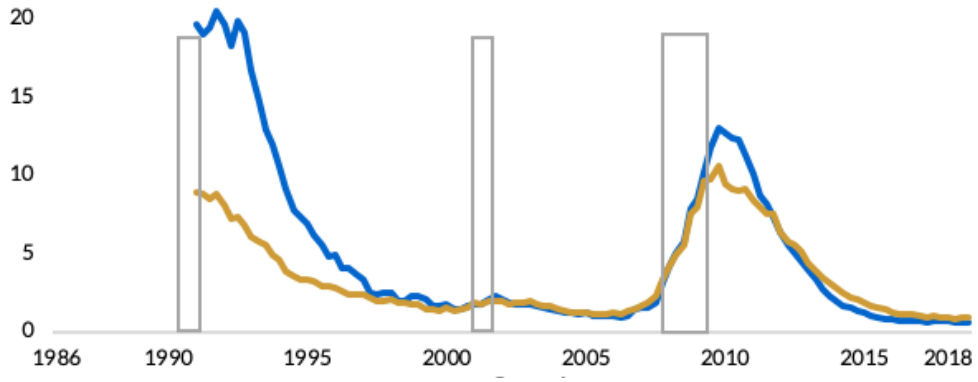
APPENDIX 4: CYCLICAL CHANGES IN DELINQUENCY RATES BY LOAN TYPE AND BANK SIZE

Figure A7: Delinquency and Charge-Off Rate by Business Loan Type and Bank Size

(a) Commercial & Industrial



(b) Commercial Real Estate



Source: Author's calculations from Federal Reserve Charge-off and Delinquency Rates on Loans and Leases at Commercial Banks database (quarterly, starting with the earliest date available: March 1987 for C&I, March 1991 for CRE).

Notes: Each bank group's charge-off rate and delinquency rate are summed for each quarter, which smooths the series given that banks (especially smaller ones) tend to concentrate charge-offs in the last quarter of each year, which causes a corresponding drop in delinquency rates in that quarter. This measure gives only an approximation of combined delinquent loans and charge-offs because delinquency rates are based on end-of-quarter loan balances, whereas charge-off rates are based on average loan balances over the quarter. Information on how the Federal Reserve calculates delinquency and charge-off rates (from banks' call reports) is available at https://www.federalreserve.gov/releases/chargeoff/about.htm.

APPENDIX 5: CORRELATIONS WITH CHANGES IN SMALL C&I LENDING AT THE BANK LEVEL IN PAST ECONOMIC EXPANSIONS

Figure A8 reports correlations at the bank level for the most recent two economic expansions prior to the current one for comparison with Figure 5 in the main text. Figure 5 shows that for the 2010-2018 period, across bank sizes, individual banks did not systematically switch from small to large C&I loans. Moreover, for the smallest banks, the two are positively correlated. Small banks show a tendency to switch from small C&I to various types of real estate lending. The strongest positive correlation is that with initial levels of capitalization. Small banks that emerged from the great financial crisis with higher capital ratios tended to have larger subsequent increases (or smaller decreases) in their small C&I lending.

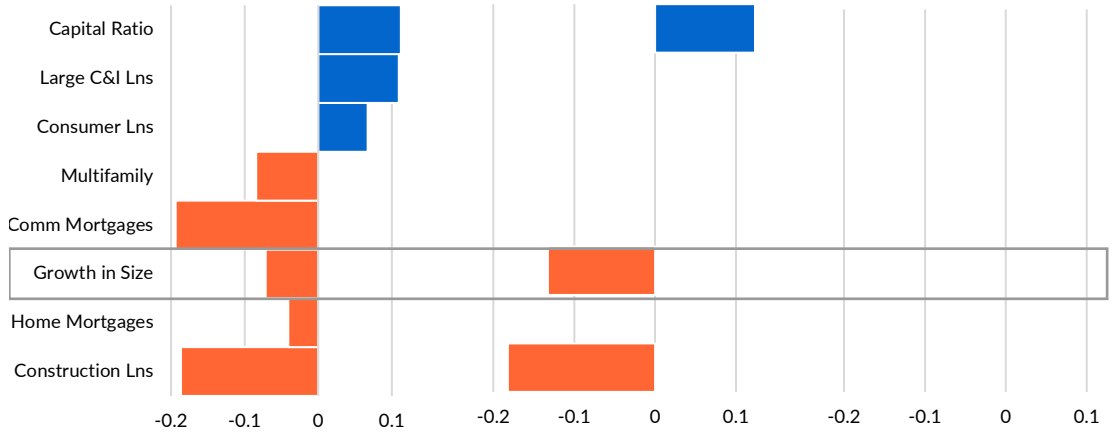
When these correlations are compared to those measured over previous economic expansions, they are similar to the results for 2002-2006. There is one notable difference from the results for 1993-2000. In the 1990s, a small bank's growth did not have a statistically significant correlation with its change in small C&I lending, but for large banks, the correlation was significant and positive; that is, large banks that were faster growing increased their small C&I lending relative to slower-growing large banks. This is consistent with some results from more rigorous multivariate approaches to estimating the empirical relationship between bank mergers and small business lending (for this general period, the mid-1990s) in the literature.[18]

18 For example, see Peek and Rosengren (1998).

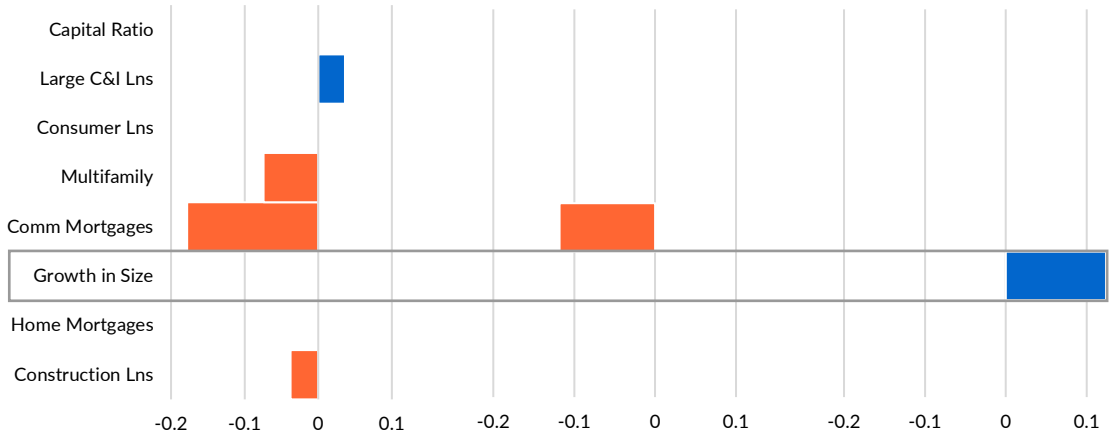
Figure A8: Correlations with Changes in Small C&I Lending at the Bank Level in Past Economic Expansions

(a) Banks < $1b (b) Banks $1b-$10b (c) Banks > $10b

2002-2006



1993-2000



Source: Author's calculations from second-quarter call reports.

Notes: Only correlations that are statistically significant at the 5 percent level or lower are graphed. Bank size and capital ratio are initial (1993 or 2002) levels, growth in size is the (1993-2000 or 2002-2006) percent change in a given bank's total assets, and all loan measures are (1993-2000 or 2002-2006) changes in percent of the bank's total assets. The periods were selected to coincide with the 1992-2000 and 2002-2006 economic expansions (defined as periods between recessions as classified by the NBER), subject to the constraint that banks did not report small business loans on their call reports until 1993.

APPENDIX 6: CORRELATIONS BETWEEN CHANGES IN SMALL C&I LENDING BY STATE, WHAT TYPES OF BANKS DO THE LENDING THERE, AND RELATED STATE CHARACTERISTICS

A quick examination of correlations shows that states that experienced a larger pre-peak boom in small business lending (typically in the years leading into the great recession, with 2008 being the most common peak year) tended to experience a larger decrease in the ensuing years. But, surprisingly perhaps, these are both uncorrelated with the magnitude of states' recent post-trough recoveries.

Also, states in which small banks account for a greater share of small business tended to have smaller post-peak contractions in small business lending. States that deregulated intrastate branching earlier than others tended to have both a larger boom and a larger subsequent contraction. Relatively urban states experienced larger booms in small business lending in the pre-crisis years, but not larger contractions. The notes to Figure 8 provide the exact definitions of these variables. It should be noted that these simple correlations do not imply causality or distinguish between demand- and supply-side mechanisms but do offer hints as to what kinds of states were poised for the greatest contractions in small business lending going into the Great Recession.

Perhaps the most striking aspect of these results is the complete absence of statistically significant correlations between states' recent recoveries in small business lending and characteristics of the market structure surrounding small business lending that seemed to matter for the preceding boom and bust (as well as a lack of correlation with the boom and bust themselves). This suggests that the ongoing recovery in small business lending may not be primarily a return to previous patterns but instead reflects regional economic trends that have shifted substantially in the decade since the Great recession.

Table A1: Delinquency and Charge-Off Rate by Business Loan Type and Bank Size

	Recovery	Post-Peak Bust	Pre-Peak Boom	Small Bank Share	Local Bank Share	High-CRE Bank Share	Branching Dereg.
Post-Peak Bust							
Pre-Peak Boom		0.424*					
Small Bank Share		-0.286					
Local Bank Share				0.712*			
High-CRE Bank Share							
Branching Deregulation		0.414*	0.358	-0.425*	-0.419*		
Urban			0.348	-0.376*	-0.459*		

Source: Author's estimates based on data from US commercial banks' CRA disclosure forms and call reports and state populations from the US Census Bureau.

Notes: See notes to Figure 8. Only those coefficients that are statistically significant with a p-value of 0.05 or less are shown in the table; * indicates a p-value of 0.01 or less.

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ABOUT THE AUTHOR

Jonathon Adams-Kane, PhD, is a research economist with the international finance and macroeconomics team at the Milken Institute. His research is mainly on international capital flows and financial stability, with a focus on analyzing structural changes in the international financial system, how crises spread among countries through international banking, and how financial crises affect firms and households.

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