

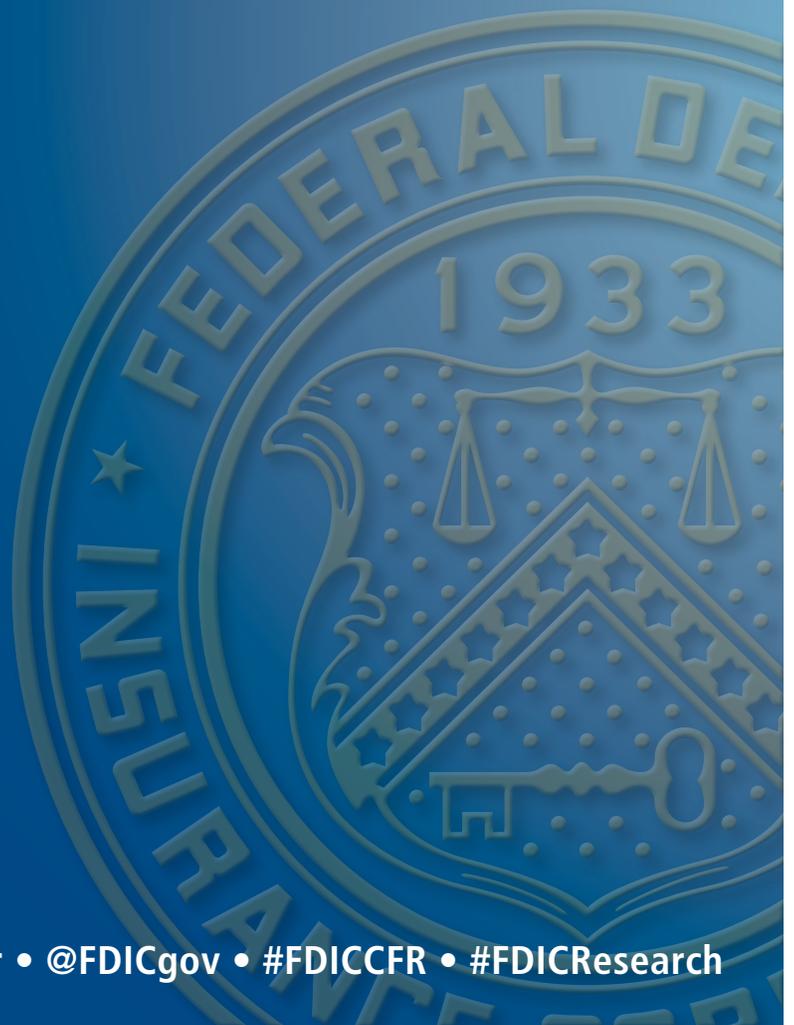
**Federal Deposit Insurance Corporation
Staff Studies**

Report No. 2020-02
Two Crises: A Comparison

March 2020



www.fdic.gov/cfr • [@FDICgov](https://twitter.com/FDICgov) • [#FDICCFR](https://twitter.com/FDICCFR) • [#FDICResearch](https://twitter.com/FDICResearch)





Two Crises: A Comparison

Lee Davison

Abstract: This study provides a “big picture” view of the banking and thrift crisis of the 1980s and early 1990s and the recent banking crisis, and examines similarities and differences between the two. It discusses why the two crises occurred and how they unfolded. For the first crisis, the study summarizes regional and sectoral problems and presents data to explain what occurred; for the second crisis, it focuses on the real estate problems that led to bank failures from 2008 to 2013. The study also compares the magnitude of the problems by looking at the number of failures, failed bank assets, problem banks and problem bank assets, failure costs, and institution size. It also looks at the performance of the deposit insurance funds and the use of appropriated funds during both crises.

The author thanks Haelim Anderson, Rosalind Bennett, Christine Blair, Martha Duncan, Roni Kisin, Thomas Murray, Shayna Olesiuk, Camille Schmidt, Lynn Shibut, Martha Solt, and Ross Waldrop for useful comments; Peter Bernstein, Michael Carabello, Michael Pessin, Benjamin Rodriguez, Alex Ufier, and Noam Weintraub for assistance with data retrieval and analysis; and Kathy Zeidler for editorial assistance.

The views expressed are those of the author(s) and do not necessarily reflect the official positions of the Federal Deposit Insurance Corporation or the United States. FDIC Staff Studies can be cited without additional permission.

Introduction

The end of the Great Depression was followed by 45 years of relative banking stability. That period of stability was followed by 35 years that saw two banking crises. As defined by the Federal Deposit Insurance Corporation (FDIC), the first of the two crises lasted from 1980 through 1994. The second post-Depression crisis was much shorter, beginning in 2008 and ending in 2013.¹

Despite their similarities, which are discussed below, the two crises had vastly different effects on the real economy. The recent banking crisis was associated with a wider financial crisis, much of which originated in the shadow banking system.² This wider crisis contributed to a deep and lasting recession that greatly exacerbated insured depository institution (IDI) failures.³ The U.S. economy suffered more severe consequences from the recent crisis than from the crisis of the 1980s and early 1990s, which was confined largely to IDIs. The present discussion compares the character and severity of the two crises only insofar as IDIs were concerned.

After reviewing some of the similarities and differences between the two crises, this study describes how the crises unfolded and compares their relative magnitude by considering IDI failure totals, insurance fund losses, IDI loss rates, failed bank assets, problem bank totals and assets, and institution size. The study then reviews the state of the deposit insurance funds and the use of appropriated (taxpayer) funds during both crises. An appendix provides additional comparative data.⁴

Similarities and Differences

The post-Depression banking crises had clear similarities. In the broadest sense, both were characterized by boom and bust cycles, with banks and thrifts helping to finance the booms and suffering in the wake of the downturns. In terms of basic levels of industry performance—return on assets (ROA) and return on equity (ROE)—the low points were similar (Figure 1). As is the nature of booms, speculation was present during both crises. Real estate lending played a crucial role as did—in some banks—weak risk management and poor underwriting. Commercial real estate (CRE) was particularly problematic. An FDIC study noted that bank decisions to loosen CRE lending standards during the 1980s were “based primarily on the assumption that real estate values (collateral values) would continue to rise in the future as they had in the recent past,” and similar attitudes remained common 20 years later.⁵ Indeed, the ratio of CRE to industry assets peaked at about the same level during both crises (Figure 2).

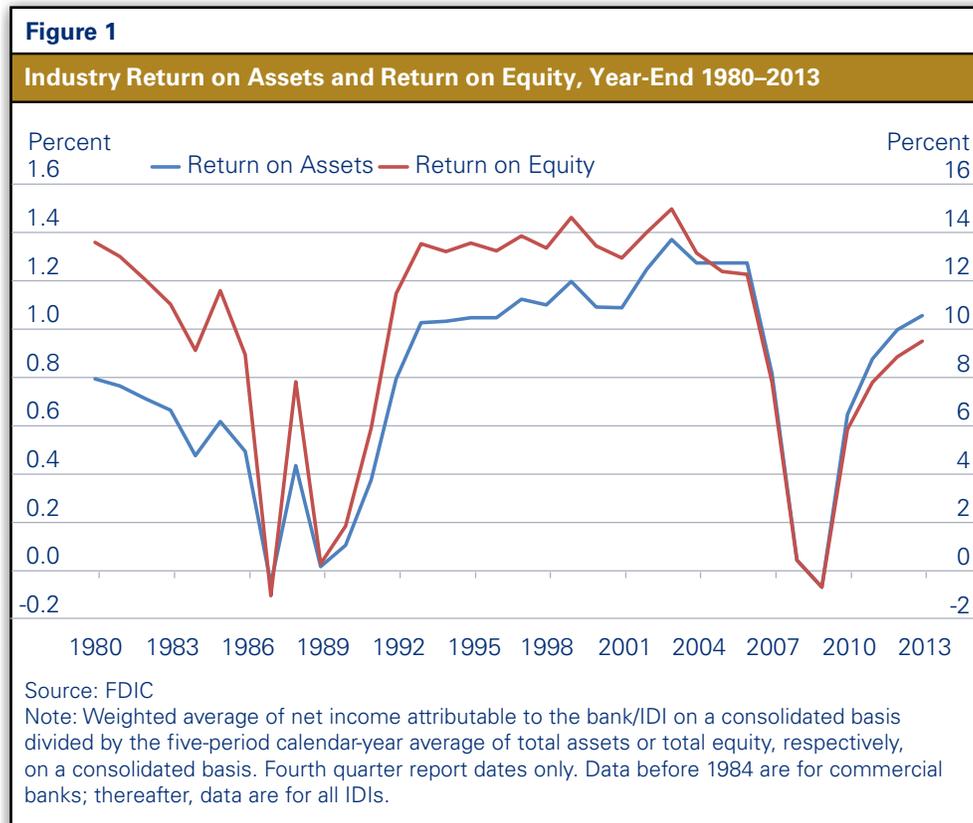
¹ The number of insured depository institution (IDI) failures remained elevated after 2013. Eighteen failures occurred in 2014; failed bank assets, however, had dropped to about the 2007 level. The number of problem banks at year-end 2014 (291 IDIs, about 4.5 percent of all institutions) also remained elevated. Problem bank assets at year-end 2014, however, had dropped to just under 0.6 percent of industry assets, a level that could be described as normal. All of these measures continued to improve in the following years. In 2015, only eight failures occurred; by year-end, the number of problem banks had further dropped (183 IDIs, about 3 percent of all institutions) as had problem bank assets (to just under 0.3 percent of industry assets). The number of failures has remained low and the number of problem banks continued to drop since 2015, with no failures during 2018 and the number of problem banks falling to 60 by year-end 2018. For a discussion of failures and problem banks during both crises, see below. Unless otherwise specified, the terms “IDIs” and banks are used interchangeably. During the first crisis, 21 IDIs placed in the FSLIC’s (Federal Savings and Loan Insurance Corporation) Management Consignment Program were later resolved by the RTC (Resolution Trust Corporation). Throughout this study these IDIs are counted as failing when the FSLIC acted. Losses for those IDIs recorded by the RTC are attributed to the FSLIC failures.

² This system consists of nonbank financial institutions that engage in banking activities and includes money market mutual funds, broker-dealers, and finance companies. For a brief overview, see Sanches (2014), 7–14.

³ There is a voluminous literature on the recent financial crisis that includes many different views on its causes. A useful introduction to some of the literature can be found in Lo (2012). For a concise discussion of the causes of the crisis, see FDIC (2017), chapter 1.

⁴ This study does not compare IDI resolutions in both crises; for an examination of this topic, see Georges DeVerges and Lynn Shibut, “FDIC Resolution Tasks and Approaches: A Comparison of the 1980–1994 and 2008–2013 Crises,” *FDIC Staff Studies* (forthcoming).

⁵ FDIC (1997), 155.



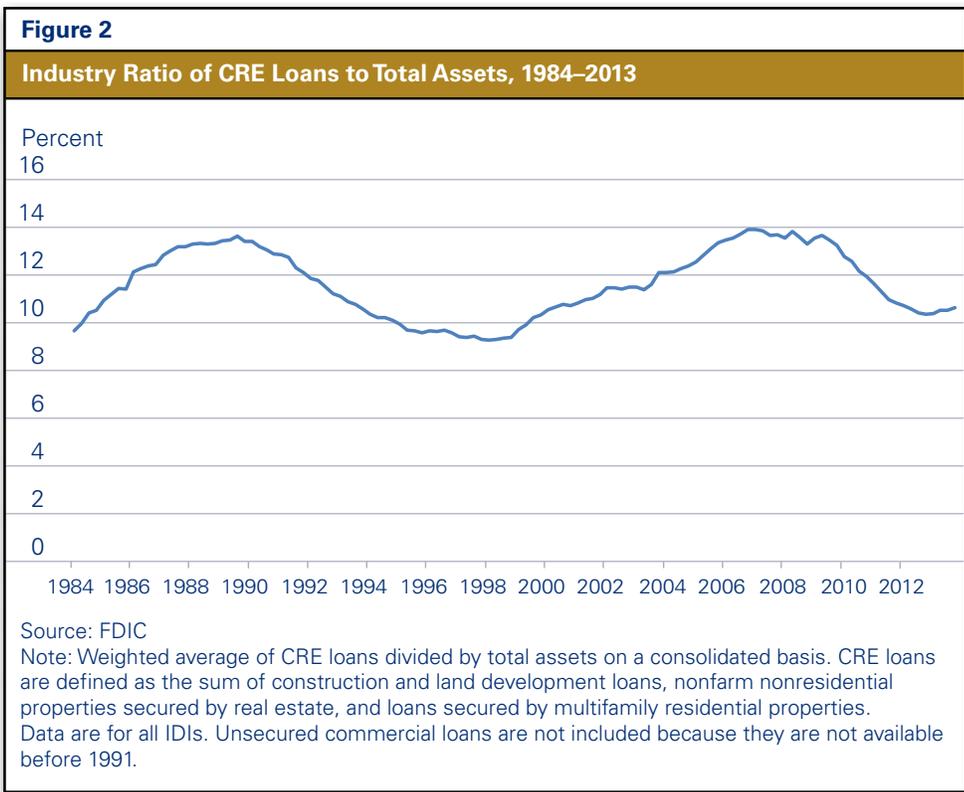
Some areas of the United States experienced high numbers of bank failures during both crises, while other areas had relatively few failures. Most institutions that failed were small. Although significant structural change and consolidation in banking occurred between 1980 and 2008, the proportion of community banks as a percentage of all banks remained quite stable, despite community banks' loss of industry asset share. In 1984, 87 percent of IDIs were community banks, compared with 90 percent in 2007.⁶ However, during both crises, some very large banks also failed or became sufficiently troubled to require assistance. With the failure and rescue of Continental Illinois Bank and Trust Company in 1984, the banking and thrift crisis gave rise to the term "too big to fail."⁷ Subsequent legislative policy changes were designed to address the problem of systemic risk, yet the second crisis demonstrated that the problem remained unresolved and that consolidation in the industry created much larger institutions and made systemic risk an even greater threat than it had been.

There were other similarities: In both crisis periods, appropriated—or taxpayer—funds (in addition to deposit insurance funds) were used to resolve (during the first crisis) or assist (during the second crisis) failed or troubled institutions, although the two mechanisms for the use of those funds differed significantly (for more detail, see the section below on the use of appropriated funds). Both crises pushed the FDIC deposit insurance fund to a negative balance and required the FDIC to significantly increase assessment rates for institutions. Both crises led to increased staffing at agencies responsible for resolving institution failures, although the number of agencies differed as did the level of increase in staffing.⁸ Both crises led to wide-ranging legislation intended to address the

⁶ There were about 19,000 banks and thrifts in 1980 but only about 8,300 in 2008. In 1984, community banks held 38 percent of industry assets, but by 2008 that share had dropped to just 14 percent. See FDIC (2012), chapter 2, 2–7.

⁷ See FDIC (1997), chapter 7.

⁸ Thrifts were insured by the FSLIC, and many failed thrifts were resolved by the RTC.

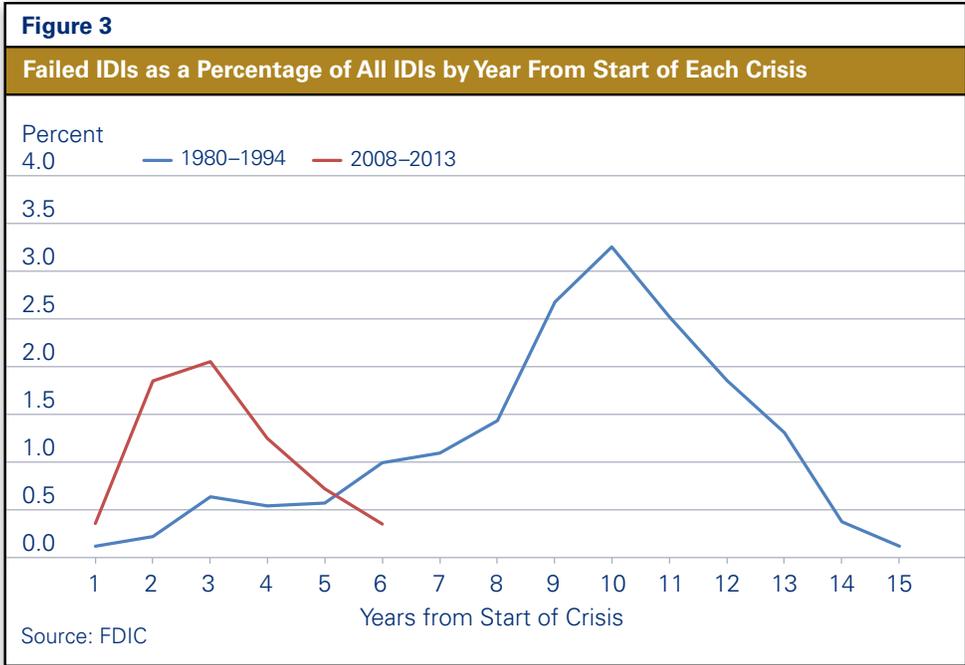


perceived problems that the dislocations to the banking system brought to light: the Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (FIRREA) and the Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA) for the first crisis, and the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Dodd-Frank Act) for the second.

But the crises were also distinctly different. IDI failures during the most recent crisis were associated with a single, deep recession, the so-called “Great Recession” (December 2007 to June 2009) that was intertwined with a wider financial crisis. In contrast, the previous banking crisis, extending over a longer period, included three recessions: two at the beginning (January to July 1980 and July 1981 to November 1982) and one near the end (July 1990 to March 1991). Failure numbers, however, did not necessarily track the recessions. During the relatively deep recession of the early 1980s, failure numbers were low. But throughout an almost decade-long economic expansion during the rest of the 1980s, failures climbed and peaked in 1989. Although national economic downturns were less important as drivers of failures, recessions in different regions and economic sectors were highly significant in the first banking crisis and explain its fragmented nature and the regional differences in IDI failures. Though the depth of the economic and banking problems differed from state to state during the second crisis, which also helps explain regional variation in IDI failures, those problems reflected the same basic national economic dislocation and national downturn in real estate markets.

The fragmented nature of the crisis in the 1980s and early 1990s explains another difference between the two crises: a contrast in duration and, more subjectively, in what might be called intensity. Since the first crisis was really a series of crises, failures increased rather gradually (a trend due partly to regulatory forbearance in the

closure of IDIs, particularly savings and loan associations [S&Ls]) and did not escalate steeply until the crisis was well under way. Bank failures during the recent crisis ramped up far more quickly, peaking in just the third year (as opposed to the tenth). Although the number of failures was different, the shape of the recent crisis resembled the peak years and end of the first crisis (Figure 3).



There were, of course, other differences. One was the existence until the mid-1990s of geographic restrictions on banking and branching. Such laws contributed to bank failures during the first crisis by limiting diversification and retarding the consolidation of weak banks into stronger ones.⁹ With the passage of the Riegle-Neal Interstate Banking and Branching Efficiency Act in 1994, Congress removed these restrictions. Another difference was the behavior of chartering authorities: during the first crisis, both federal and some state regulators continued to charter new banks even as the banking environment deteriorated (commercial bank chartering peaked in 1984), despite the tendency of de novo banks to fail at a high rate. During the recent crisis, de novo banks again failed at a much higher rate than established banks, but relatively few were chartered after the crisis began and almost none after 2010.¹⁰ A third—and important—difference was that subprime lending¹¹ was insignificant during the 1980s and early 1990s but grew rapidly from the late 1990s, as did loan securitization.¹² Securitization and derivatives markets were far less developed during the first crisis but were inextricably linked to the second, although relatively few IDI failures stemmed directly from bank ownership of either mortgage-backed securities or instruments such as collateralized debt obligations.¹³

The two crises shared certain characteristics but differed in significant ways. The differences complicate any attempt to compare the two. A more detailed description of how the two crises unfolded is presented in the next two sections.

⁹ See FDIC (1997), 16–18.

¹⁰ For de novo chartering in the 1980s, see FDIC (1997), 106–10; for the recent crisis, see Lee and Yom (2016).

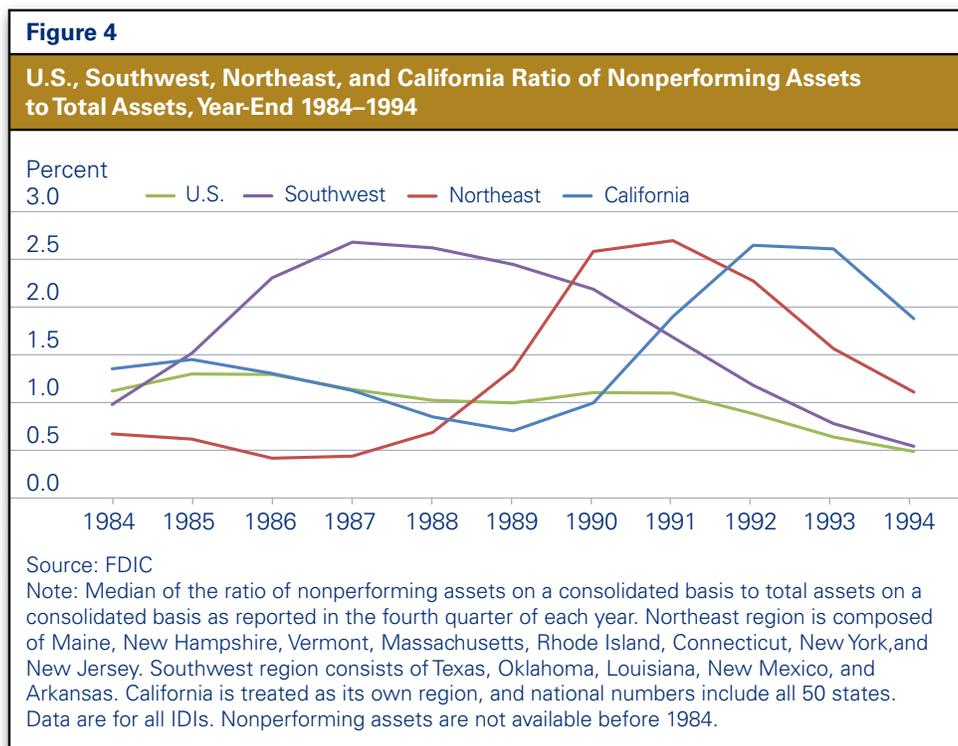
¹¹ Subprime loans are higher-interest loans that involve elevated credit risk and are generally viewed as higher risk.

¹² Barth, Li, et. al (2008), 2–3, and Chomsisengphet and Pennington-Cross (2006).

¹³ For example, institutions that did not fail typically had higher ratios of asset-backed securities plus mortgage-backed securities to total assets than institutions that did fail. This was the case for institutions under \$1 billion in assets and institutions from \$1 billion to \$10 billion in assets; the ratios for institutions over \$10 billion in assets were very similar. For some individual institutions, however, the portfolio of these securities was identified as a significant cause of failure. For a discussion of the role of securitization during the recent crisis, see FDIC (2017), chapter 1.

The Banking and Thrift Crisis of the 1980s and Early 1990s

The banking and thrift “crisis” was actually a series of crises that arose in various regions and economic sectors and among different types of IDIs. The length of the period of industry troubles stemmed from these circumstances. The S&L crisis spanned essentially the entire crisis period (the 1980s through the early 1990s). Problems in commercial banking began in the early to mid-1980s following an agricultural boom and bust that mostly affected the Midwest; then, in the middle to late 1980s, banking problems followed an energy boom and bust in the Southwest; next, during the late 1980s and early 1990s, banking problems in the Northeast followed what was primarily a real estate boom and bust in that region; and finally, in the early 1990s, a recession that hit California in the early 1990s created problems for banks in that state. The number of bank failures from these regional economic dislocations was significant. The sequential nature of these regional problems can be seen in the trends in nonperforming loans shown in Figure 4. The regional distribution of failures is presented in Figure 5. (See appendix for data on failed IDIs as a percentage of all IDIs in each state.) The end of the national recession in the early 1990s, coupled with significantly lower interest rates, allowed the banking industry to enter into a period of high profitability and few failures—a period that lasted until 2007, when the recent crisis began.

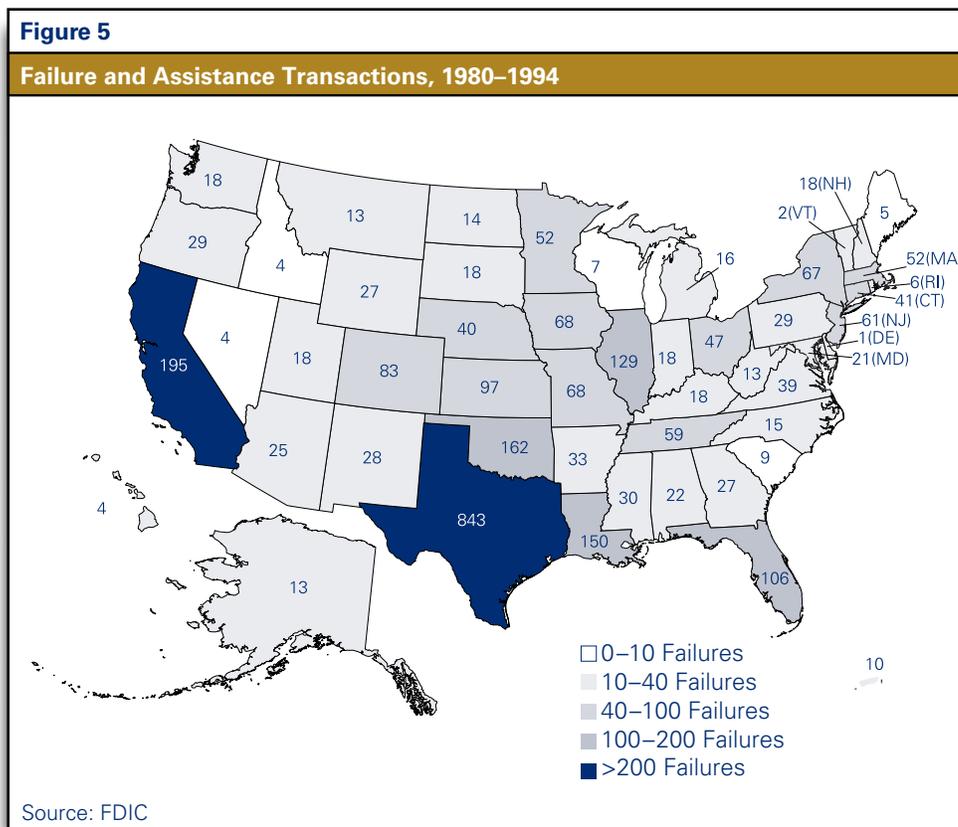


The S&L problem became evident at the beginning of the first crisis and lasted until its end.¹⁴ An important underlying cause was the extremely high interest rate environment during the late 1970s and early 1980s: high rates fundamentally undermined the S&L business model. With most assets in long-term fixed-rate mortgages, the rise in interest rates erased the industry’s net worth and pushed many institutions into insolvency.¹⁵ Although deregulation in the early 1980s was designed to “fix” the S&L problem, the fix included allowing thrifts to expand

¹⁴ This summary is drawn from National Commission on Financial Institution Reform, Recovery, and Enforcement (1993).

¹⁵ S&Ls were insured by the FSLIC (until its abolition in 1989) and not the FDIC, but the interest-rate mismatch did affect one set of FDIC-insured institutions: mutual savings banks. See FDIC (1997), chapter 6.

into new asset areas, which encouraged rapid growth and increased risk on the part of many S&Ls. Some moved into CRE lending and other risky activities. At the same time, regulation and supervision at the federal and state levels were inadequate.¹⁶ In addition, the S&Ls were affected by some of the same forces that were driving the burgeoning banking crisis: the 1981 Tax Act provided tax preferences for real estate investments and helped create a boom in real estate, but the elimination of many of those tax benefits by the 1986 Tax Act helped hasten a real estate bust. S&L failures were concentrated in Texas (where the problem was particularly severe), Florida, and California. Resolving the S&L problem would require the creation of a new government agency, the Resolution Trust Corporation (RTC), and the use of taxpayer funds.¹⁷ Texas alone accounted for 18.3 percent of the RTC's resolutions and 29.2 percent of its resolution costs.



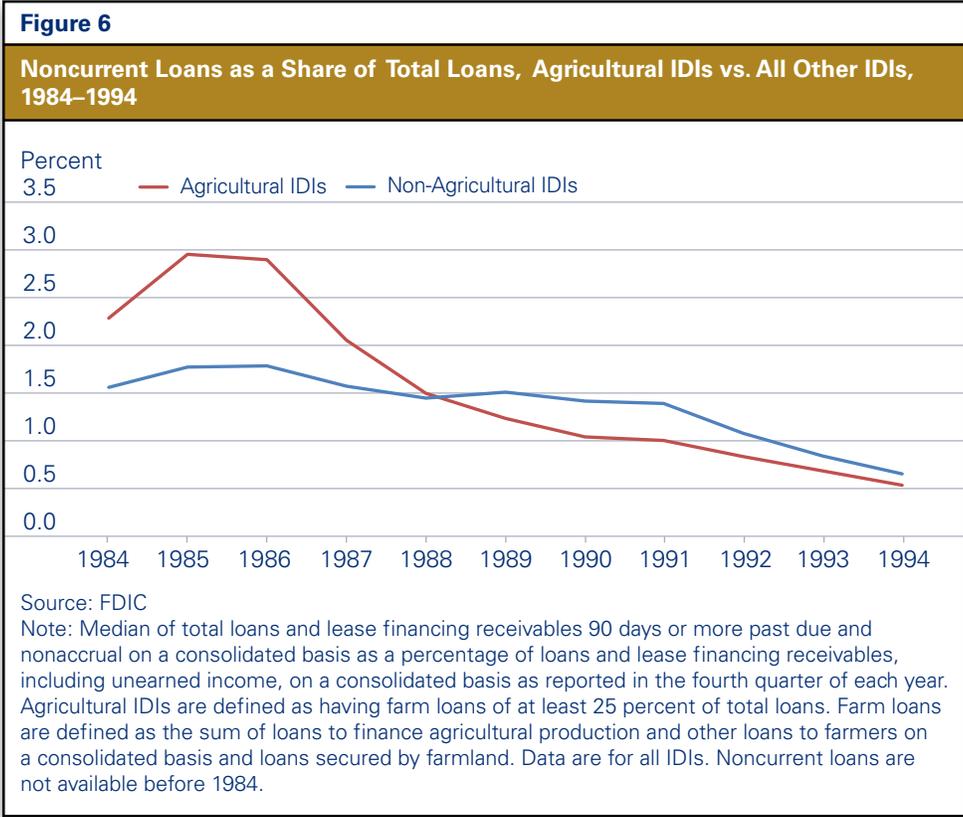
The first of the regional banking crises occurred mainly in the Midwest but also in parts of the Southwest, in states where many banks specialized in agricultural lending.¹⁸ A 1970s boom in agriculture had caused a large rise in crop prices and an associated rise in the value of farm real estate; farmers and lenders had been encouraged to greatly expand credit-financed purchases of farmland. But in the early 1980s, high interest rates increased farm operating costs and reduced expected income, while foreign demand for U.S. agricultural products declined. Farmland prices peaked in 1981 and 1982 and then declined significantly, in some states precipitously. Many

¹⁶ See FDIC (1997), 170–73, and National Commission (1993), 3–4.

¹⁷ FDIC (1997), 291.

¹⁸ The discussion on the agricultural problems during the period relies on FDIC (1997), chapter 8.

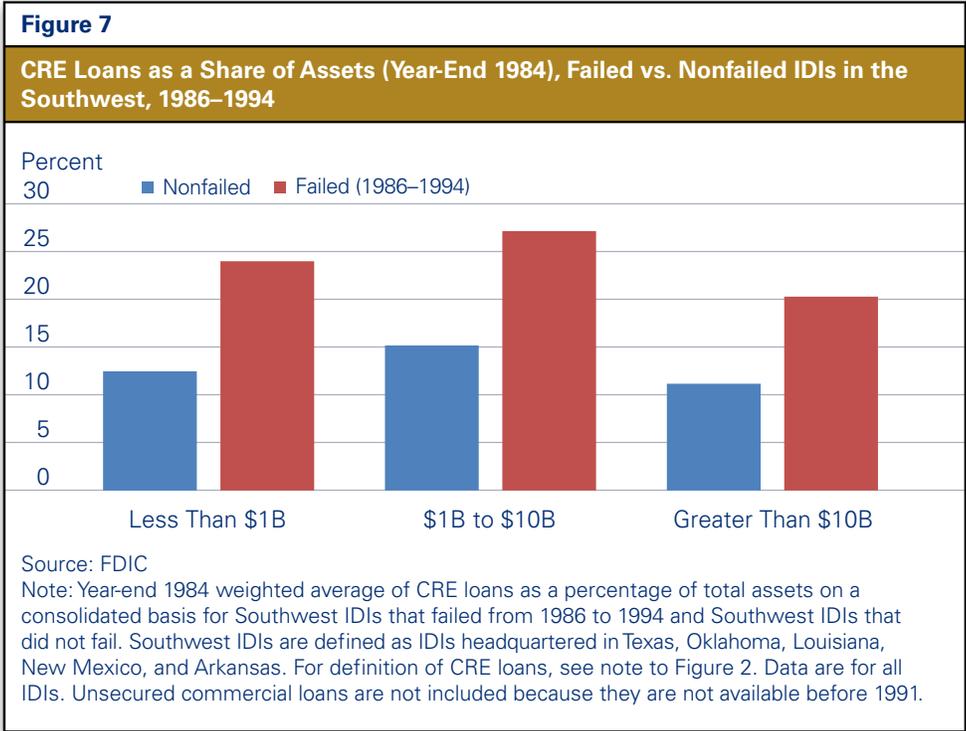
farmers could not service their debt. By 1984, banks with high concentrations in farm lending began to suffer, and noncurrent loans as a share of all loans at such institutions peaked from 1985 to 1986 (Figure 6). The number of agricultural bank failures increased rapidly during those years and remained elevated through 1987. Most agricultural banks survived, but those with the highest loans-to-assets ratios were much more likely to fail, suggesting that banks that lent most heavily into the boom were more likely to fail than were those that chose more conservative lending policies.



The next regional banking crisis, and the most severe in terms of the number of failures, took place in the Southwest during the middle to late 1980s.¹⁹ From 1987 through 1989, 71 percent of the FDIC-insured banks that failed were in the Southwest. Some of these failures were large institutions, including First City Bancorporation in Houston and First Republic Bank Corporation and MCorp in Dallas. From 1980 to 1989, 425 Texas commercial banks failed, as did eight of the state’s ten largest bank holding companies that existed in 1985. Oil had formed the foundation of the region’s economy and was a force behind its banking problems. Between 1973 and 1981, the average monthly import price for crude oil rose from \$2.75 to \$36.95 per barrel; this price rise created an oil boom and became the basis for regional economic prosperity. The boom was supported by bank lending to the energy markets. But after oil prices peaked in 1981, they declined steadily until 1985 because of energy conservation efforts, increased oil production, and international political developments. As oil prices weakened, banks in the Southwest sought new markets and increased their lending to the then-booming real estate markets, particularly CRE. Unfortunately, the real estate markets had been buoyed by strength in the energy market.

¹⁹The discussion about banking problems in the Southwest relies on FDIC (1997), chapter 9.

Then in 1986, oil prices dropped precipitously. The Southwest economy was hit hard, and the real estate market in the region collapsed, as did the regional economy as a whole. Southwestern banks, already weakened by energy loan problems and struggling because of intense competition from recently deregulated S&Ls, suffered substantial losses on real estate loans that led to further failures. Bank failures in the Southwest were caused mostly by asset quality problems related to increased CRE lending, especially in Texas; banks that failed in Houston and Dallas (as well as in Oklahoma City, Oklahoma) had significantly higher CRE concentrations than banks that survived. It is noteworthy that failed Texas FDIC-insured banks had generally increased their lending concentrations in construction and land development loans long after real estate markets had started to decline, and southwestern banks with high loans-to-assets ratios were more likely to fail. Figure 7 shows a comparison of CRE loans in failed and nonfailed institutions in the Southwest.

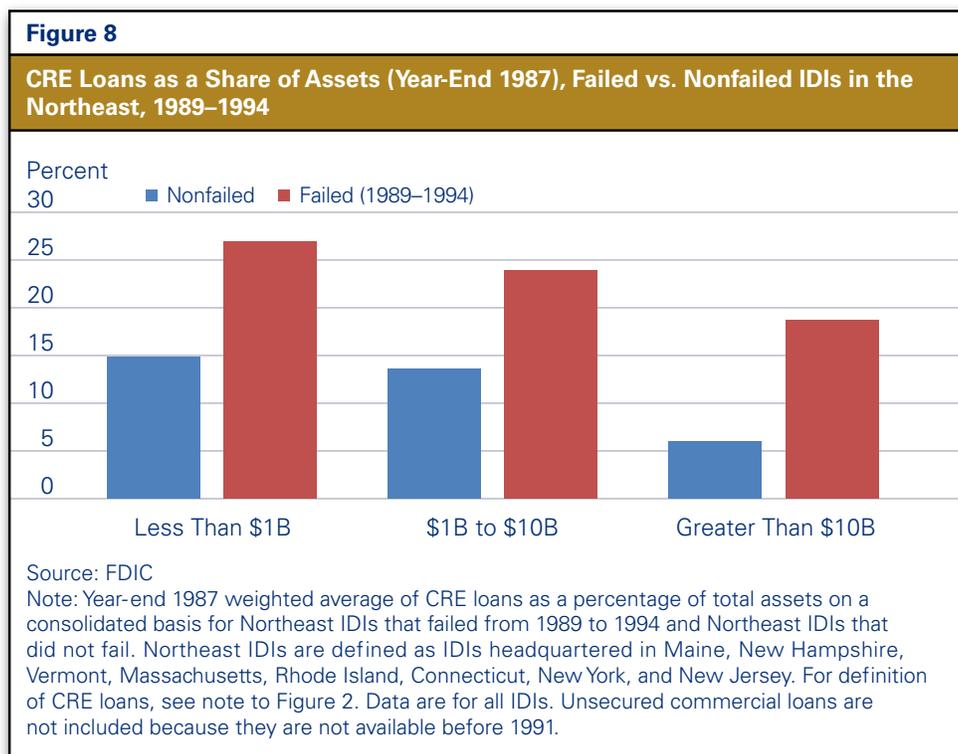


In the Northeast, a strong regional economy during much of the 1980s had led to booms in both residential and commercial real estate and, in turn, to overbuilding and speculation.²⁰ In the late 1980s, the region’s economy weakened partly because of a slowdown in military spending and a decline in the high-tech industry near Boston. Real estate markets deteriorated, and real estate prices plummeted. Commercial and residential real estate overbuilding in New York and New Jersey also contributed to declining real estate prices after 1988. From 1989 through 1992, the northeastern economy significantly underperformed the U.S. economy, and the fact that the region’s economic problems coincided with a national recession between 1990 and 1991 likely exacerbated banking problems in the Northeast.

The problems of northeastern banks stemmed largely from their aggressive participation in the real estate markets of the 1980s. Between 1983 and 1986, asset growth among FDIC-insured banks in the region increased from an annual rate of less than 1 percent to nearly 12 percent. The conversion of many savings banks from mutual to stock ownership during the mid-1980s was especially significant for asset growth. Conversion to stock

²⁰ The discussion of banking problems in the Northeast relies on FDIC (1997), chapter 10.

form added to a bank's ability to participate in the booming real estate markets.²¹ Between 1983 and 1989, the median ratio of real estate loans to assets among those banks doubled from about 25 percent to 51 percent. This increase was fueled both by residential and commercial lending, but it was CRE lending concentrations that contributed most to IDI asset quality problems and bank failures (Figure 8). During the 1980s, CRE loan portfolios as a percentage of bank assets had more than doubled at FDIC-insured banks in the Northeast (from 6.5 percent to 14 percent).

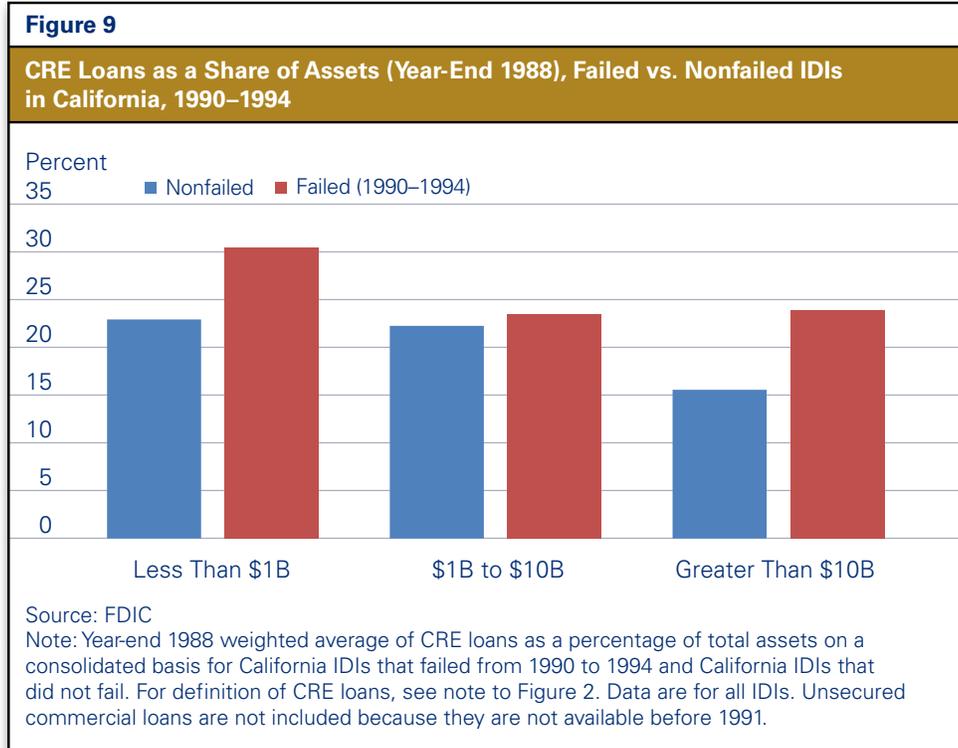


The last of the regional problems occurred in California, which had a vibrant economy during most of the 1980s.²² Although the gains were statewide, they were greatest in Southern California and were driven by a combination of growth in the defense industry and the construction industry after a fallow period in the latter during the early 1980s. Housing construction increased significantly (through 1986, the increase was particularly in multifamily housing, but until the end of the decade the construction of single-family housing remained strong): the increase in residential construction was due both to supply shortages and speculation. An office-building boom also occurred, particularly in Los Angeles, generated partly by Japanese investment.

Although many Californians believed the state was fundamentally different from the rest of the United States and that no bust would follow the boom, the California economy began to deteriorate in 1989 and fell into recession in 1990. The combination of a national recession from 1990 to 1991, a substantial decline in defense spending, and the collapse of the state's residential and commercial real estate markets brought the boom to an end. As had been the case in other regions, the banks in California that failed had higher concentrations of CRE loans than the banks that survived (Figure 9).

²¹ Conversion to stock form provided institutions with access to equity capital and an expanded potential for loan growth and so allowed for greater participation in real estate markets.

²² The discussion on banking problems in California relies on FDIC (1997), chapter 11.



Insured Depository Institutions and the Recent Financial Crisis

For the banking industry, the end of the crisis of the 1980s and early 1990s was followed by a dozen years of excellent performance, with record profits reported almost every year (apart from the brief recession of 2001 to 2002).²³ During much of the period, loan-loss provisions and loan charge-offs remained low, while asset growth, apart from the single recessionary period, was robust.

During this same period, real estate-related lending by banks increased significantly. The increase combined with several other factors—including a protracted period of low interest rates, new mortgage products (often accompanied by poor underwriting), growth in securitization, the use of leverage by both financial institutions and individual borrowers, and speculation—to create an unprecedented housing bubble in the United States. The bursting of that bubble created a financial crisis that intensified an already-worsening recession, and the crisis and recession were the primary causes of the large number of IDI failures that constituted the recent banking crisis. Also playing a significant role in IDI failures—as had been the case during the previous banking crisis—were increased concentrations in real estate lending (a dominant feature of the 15-year period of stability), especially in CRE.

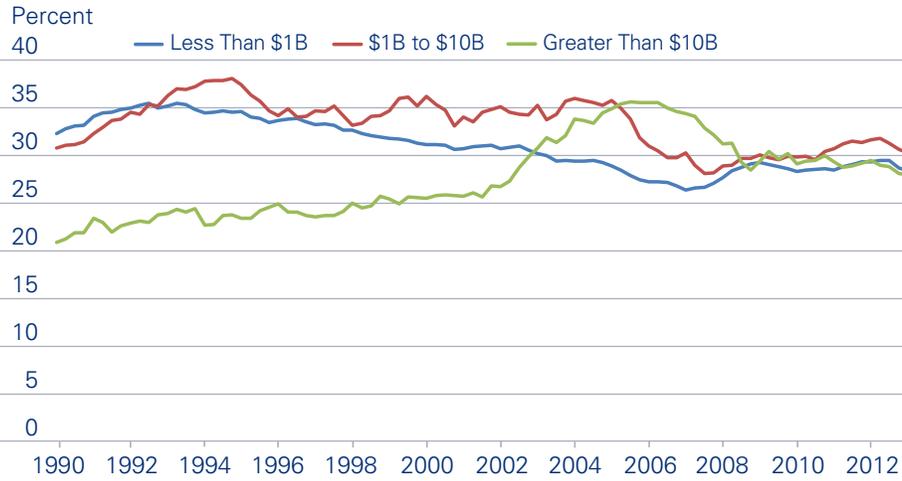
The significant increase in real estate lending characterized banks of every size. At the largest banks (those with more than \$10 billion in assets), there was strong growth in residential real estate lending, especially from the early 2000s (Figure 10). But as shown in Figure 11, among small and midsized banks, CRE lending grew steadily from the late 1990s onward. These trends dated to the mid-1980s, when larger banks increased their residential real estate lending while community banks decreased residential real estate lending and greatly increased CRE lending.²⁴

²³ The discussion in this section draws extensively on the analysis in Kupiec et al. (2011).

²⁴ FDIC (2012), chapter 5.

Figure 10

Residential Mortgage Assets as a Share of Total Assets, by Institution Size, 1990–2013

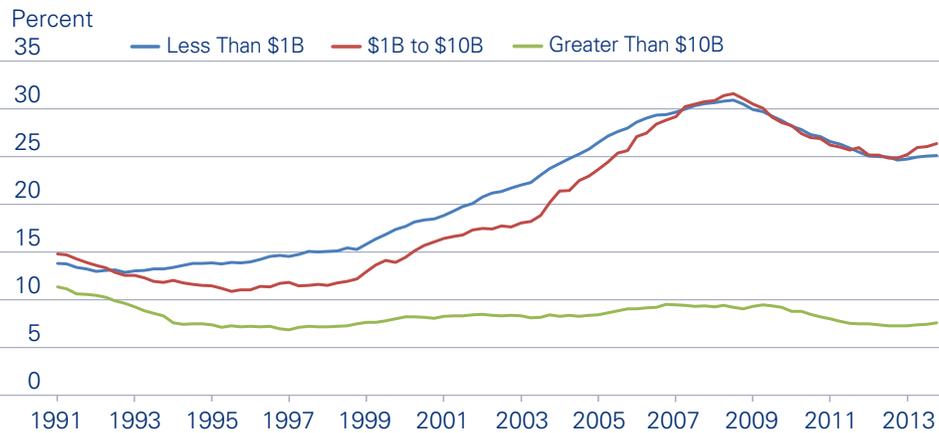


Source: FDIC

Note: Weighted average of mortgage assets divided by total assets on a consolidated basis. Mortgage assets are defined as the sum of revolving, open-end loans secured by 1–4 family residential properties and extended under lines of credit; all other loans secured by 1–4 family residential properties, excluding revolving and open-end loans; and mortgage-backed securities on a consolidated basis. Data are quarterly and are for all IDIs.

Figure 11

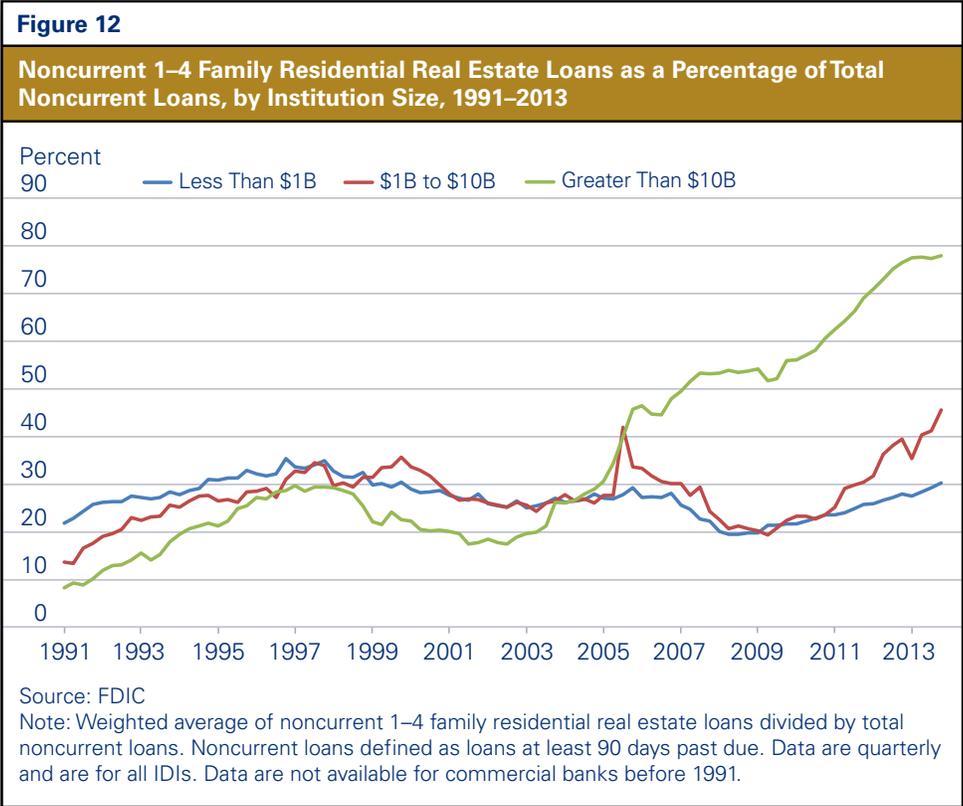
CRE Assets as a Share of Total Assets, by Institution Size, 1991–2013



Source: FDIC

Note: Weighted average of CRE loans divided by total assets on a consolidated basis. For definition of CRE loans, see note to Figure 2. Data are quarterly and are for all IDIs. Unsecured commercial loans were not reported before 1991.

But even while real estate prices were continuing to rise, the performance of real estate loan portfolios began to decline. At large banks, noncurrent residential loans as a percentage of all noncurrent loans started growing in 2003 and had more than doubled by 2008 (Figure 12). The ratio of noncurrent CRE loans to all noncurrent loans at small and midsized banks began to grow gradually from about 2000 and jumped sharply after 2006 (Figure 13). As the real estate boom began to deflate, mortgage delinquencies and foreclosures increased, industry losses rose, and profits declined. Bank loan loss provisions grew rapidly, doubling in 2007 and more than doubling again in 2008.

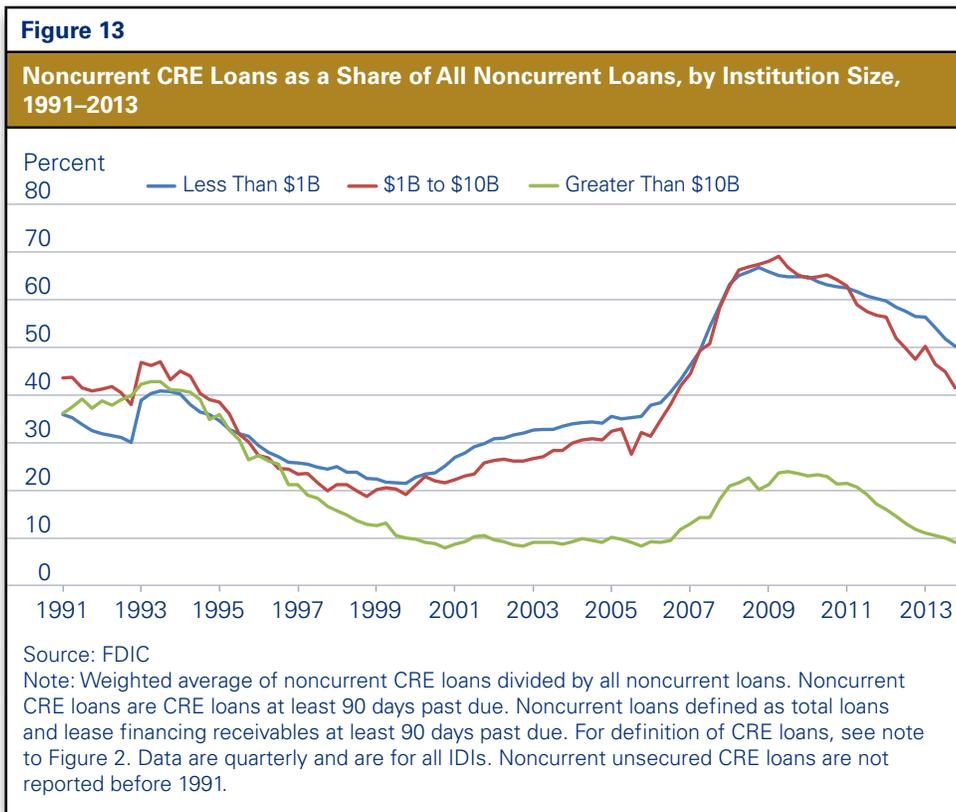


Although only three banks failed in 2007, there were 25 failures and five assistance transactions in 2008. These included the costliest failure in FDIC history, IndyMac Bank, F.S.B., and the largest failure (by asset size) in FDIC history, Washington Mutual Bank. Both failed because of mortgage-related losses. Washington Mutual failed in September 2008, when concerns about losses from mortgage-backed securities and from derivatives based upon those securities led to frozen credit markets and massive illiquidity in the financial system.

The financial crisis, which had been emerging during 2008, reached its height in September when the liquidity crisis endangered not only large financial institutions but also the entire financial system. In that month, the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac) were taken into conservatorship, the investment bank Lehman Brothers failed, the insurance company American International Group received government assistance, and extraordinary financial assistance was approved for Wachovia Corporation, though Wachovia’s subsequent acquisition by Wells Fargo obviated the need for such assistance.²⁵

²⁵ In addition to Wachovia Corporation, extraordinary financial assistance would be provided to Citigroup in November. A similar assistance package for Bank of America Corporation would be approved in January 2009, although that transaction was never completed. For a detailed discussion of the assistance transaction for Citigroup and the proposed assistance transactions for Wachovia Corporation and Bank of America Corporation, see FDIC (2017), chapter 3. The government also put in place a number of programs designed to aid IDIs or their parent holding companies, including October’s statutorily provided Troubled Asset Relief Program, the FDIC’s Temporary Liquidity Guarantee Program, and the Federal Reserve’s Commercial Paper Funding Facility.

The recent crisis greatly exacerbated the effects of the recession that had begun in December 2007. As economic activity suffered a substantial decline and unemployment rose significantly, asset quality at banks decreased; the number of bank failures increased greatly in 2009 and 2010 (148 failure and assistance transactions in 2009; 157 failures in 2010). Increasingly, many smaller institutions failed, particularly where real estate markets were hit especially hard and where CRE and acquisition, development, and construction (ADC) loans were significant portions of loan portfolios.²⁶



As in the earlier crisis, bank failures this time did not occur uniformly across the United States. During the earlier crisis, however, the pattern was due to differing regional economic problems, whereas during the recent crisis the pattern was caused by varying levels of economic distress stemming from essentially the same problem. During the recent crisis, the largest numbers of failed banks were headquartered in Georgia (87), Florida (70), Illinois (56), and California (41) (Figure 14)—generally states where economic dislocation was relatively greater and mortgage delinquency rates were relatively higher.²⁷ (See appendix table for data on failed IDIs as a percentage of all IDIs in each state.) These differences are also reflected in various measures of bank performance. For example, during the recent crisis, states with high numbers of failures had higher ratios of nonperforming assets to total assets (Figure 15).

²⁶ In addition to the discussion here, see FDIC (2017), chapter 4, and GAO (2013).

²⁷ The number of failures alone provides incomplete information for comparison, however. First, just the fact that these numbers refer to the states where IDIs are headquartered distorts the relative severity of banking problems. Second, no two states have the same number of IDIs. Taking these two factors into account can cause the picture to change. Illinois, with a long history of branching restrictions, had a large number of IDIs, so its 56 failures constituted only about 8 percent of IDIs and IDI assets in the state. For Georgia, the number of failures (87) represented about 24 percent of the IDIs in the state and 12 percent of IDI assets; for Florida (70) about 21 percent and 22 percent, and for California (41) about 12 percent and 20 percent. For data on all the states (number and percentage of failed institutions and failed-institution assets) during both the banking crisis of the 1980s and early 1990s and the recent banking crisis, see appendix table.

Figure 14

Failure and Assistance Transactions, 2008–2013

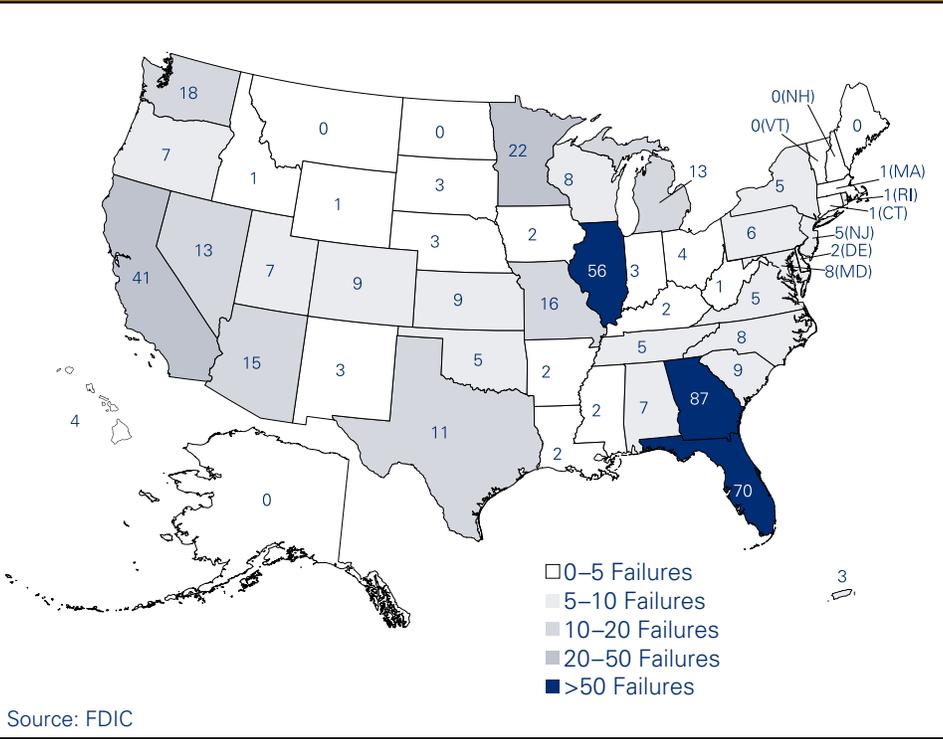
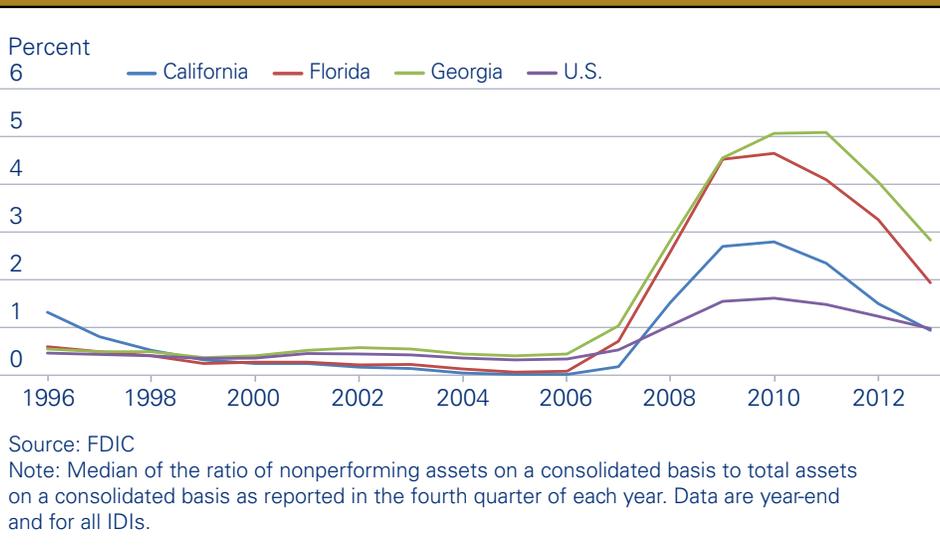


Figure 15

Ratio of Nonperforming Assets to Total Assets, IDIs in California, Florida, and Georgia vs. U.S., 1996–2013



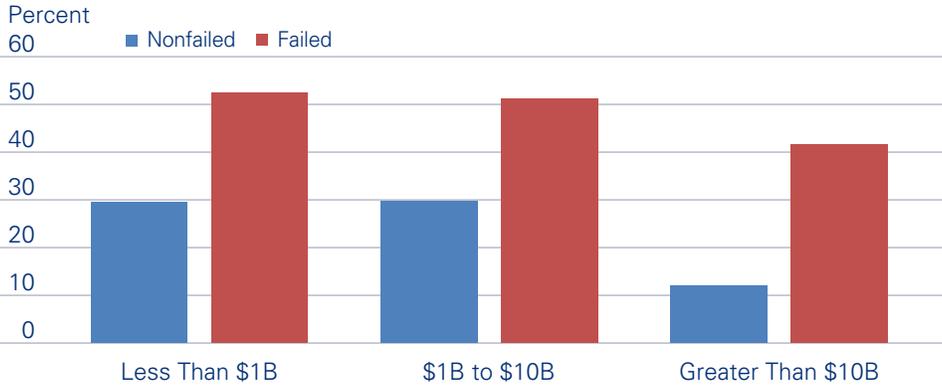
There were differences in the characteristics of institutions that failed and those that did not. Overall, IDIs with more exposure to lending in general and to CRE lending in particular failed more often than IDIs with less exposure of that kind. As shown in Figure 16, IDIs in all size groups that failed had higher loans-to-assets ratios before the crisis than those that did not (a trend observed often during the earlier crisis). IDIs in all size groups that failed had greater CRE lending concentrations than those that did not. As of year-end 2007, CRE made up just over 50 percent of total assets at failed institutions with less than \$1 billion in assets and failed institutions with \$1 billion to \$10 billion in assets, but CRE was just 30 percent of total assets in nonfailed IDIs in both of those size groups (Figure 17). For IDIs with more than \$10 billion in assets, CRE made up more than 40 percent of total assets among failed institutions but just 12 percent of total assets for nonfailed IDIs. ADC lending, considered the riskiest kind of CRE lending, was particularly problematic. The more concentrated an institution was in ADC lending, the more likely it was to fail. Failed institutions had roughly three times the average ADC concentrations of nonfailed institutions.²⁸ As for residential real estate loans, among larger institutions, those that subsequently failed had higher concentrations of residential real estate loans than those that did not fail (Figure 18). Among smaller institutions the reverse held true: nonfailed IDIs had higher residential real estate concentrations than those that failed. As had been the case during the 1980s and early 1990s, concentrations in real estate lending, especially CRE, played a significant role in IDI failures during the recent crisis.



²⁸ See FDIC (2017), 119–20; FDIC (2012), 1.

Figure 17

Failed vs. Nonfailed IDIs, CRE Loans as a Share of Assets by Size Group, Year-End 2007

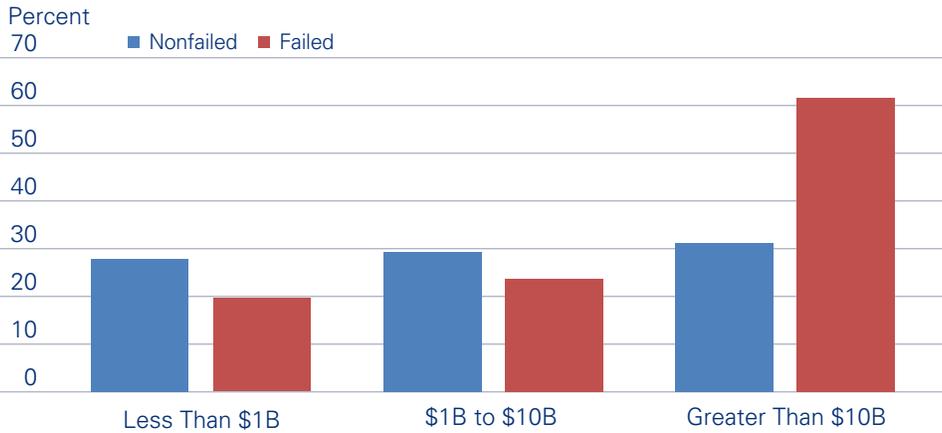


Source: FDIC

Note: Year-end 2007 weighted average of CRE loans as a percentage of total assets on a consolidated basis for IDIs that failed from 2008 to 2013 and IDIs that did not fail. For definition of CRE loans, see note to Figure 2. Assistance transactions under systemic risk exceptions are excluded. Failed IDIs are merger adjusted up to the quarter before failure.

Figure 18

Failed vs. Nonfailed IDIs, Residential Real Estate Loans as a Share of Assets, by Size Group, Year-End 2007



Source: FDIC

Note: Year-end 2007 weighted average of residential real estate loans as a percentage of total assets on a consolidated basis for banks that failed from 2008 to 2013 and IDIs that did not fail. Residential real estate loans are defined as the sum of revolving open-end loans secured by 1-4 family residential properties and extended under lines of credit; mortgage-backed securities; and all other loans secured by 1-4 family residential properties, excluding revolving and open-end loans. Assistance transactions under systemic risk exceptions are excluded. Failed banks are merger adjusted up to the quarter before failure.

The Comparative Magnitude of the Problems

Which crisis was more severe? The recent crisis in its entirety extended far beyond IDIs and was therefore far more serious than the crisis in the 1980s and early 1990s. The recent crisis also consisted of two interconnected crises—a financial crisis from 2008 to 2009 that threatened large financial institutions both inside and outside the traditional banking system, and a banking crisis from 2008 to 2013 that led to large numbers of failed IDIs. In this section, we compare the relative sizes of the two banking crises, so the analysis is confined only to IDIs—yet even such a limited comparison is not straightforward.

First, during the recent crisis, the FDIC insured and resolved both failed commercial banks and savings institutions, whereas during the previous crisis, the FDIC insured and resolved only commercial banks and a small subset of savings institutions. Most savings institutions were insured by the Federal Savings and Loan Insurance Corporation (FSLIC) until August 9, 1989. FIRREA abolished the FSLIC effective on that date and created the RTC to resolve failed FSLIC-insured institutions; the RTC operated through 1995. Thus, a comparison only of FDIC-insured failed institutions in the two periods would dramatically understate the severity of the problems during the 1980s and early 1990s. A comparison must include both insured commercial banks and savings institutions, regardless of whether savings institutions were insured by the FDIC or the FSLIC or were resolved by the RTC.

A second consideration is the types of failures to include when comparing the crises. In previous studies, the FDIC generally interpreted all assistance transactions as failures, the rationale being that an institution that received government open-bank assistance could not be presumed to have been able to survive without it. During the first crisis, a significant number of open-bank assistance transactions occurred.²⁹ Few such transactions occurred during the recent crisis, however, because of statutory changes that put in place requirements for least-cost resolutions and so sought to limit open-bank assistance.³⁰ The assistance transactions that did take place involved assistance under the systemic risk exception and went to two of the largest banking organizations in the United States. The inclusion or exclusion of these two assistance transactions therefore has a tremendous effect on some comparisons between the two crises. In the present discussion of comparative magnitudes, unless otherwise noted, both failed and assisted institutions are treated as failures.

Finally, during the recent crisis, many emergency programs were created, some of which provided assistance to IDIs or their parent holding companies. Participation in these programs was not analogous to open-bank assistance transactions, and their presence demonstrates another way in which a comparison of the two crises is complicated. These programs were, however, important and some were large in scope. For example, to address bank liquidity needs, the Federal Reserve in 2007 extended maturities on discount window borrowings and created the Term Auction Facility (TAF). Combined, use of the discount window and the TAF averaged \$221 billion outstanding per day from August 2007 through December 2009. Approximately 20 percent of U.S. banks with total assets up to \$1 billion and 62 percent of U.S. banks with total assets greater than \$1 billion used these facilities during the crisis. Through both facilities, the Federal Reserve made more than 30,000 loans with a par value of close to \$15 trillion.³¹ Also, more than 700 IDIs or their parent holding companies received assistance under the 2008 Troubled Asset Relief Program (TARP). In addition, 121 IDIs, bank holding companies, or other eligible entities issued about \$618 billion in guaranteed debt through the FDIC's Temporary Liquidity Guarantee Program (TLGP, also established in 2008); at the program's peak, almost \$350 billion in TLGP-guaranteed debt was outstanding.³²

²⁹ In total, 137 FDIC-insured institutions received open-bank assistance from 1980 to 1994, and most of these transactions generated a loss to the insurance fund. More than 400 FSLIC assistance transactions took place from 1980 to 1988 (the last full year of the FSLIC's existence).

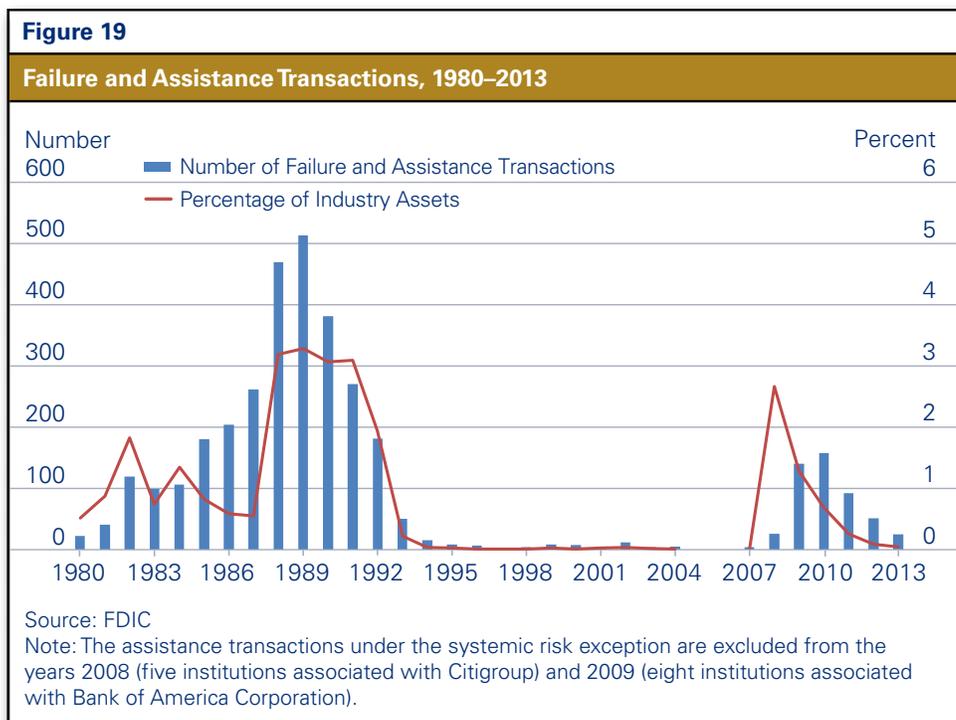
³⁰ As a result of the first crisis, FDICIA in 1991 mandated that the FDIC use a least-cost resolution method but provided for an exception for institutions that were deemed to constitute a risk to the financial system.

³¹ Berger, et. al. (2017), 2, 4. For a more general discussion of the Federal Reserve's emergency programs, see Brave and Genay (2011).

³² For a detailed discussion on the TLGP, see FDIC (2017), chapter 2.

The Number of Failures

The most obvious comparative measure is simply the number of failures (Figure 19). From 1980 through 1994, 2,914 IDIs failed, about 16 percent of the institutions in existence at year-end 1979. During the recent crisis (2008 through 2013), 502 IDIs failed, about 7 percent of the IDIs that existed at year-end 2007. Although the first crisis period was more than twice as long as the second, 71 percent of the failures in the first crisis took place during the six years from 1987 through 1992, a period equivalent to the entire duration of the recent crisis. In terms of the sheer volume of failures, the first crisis clearly had far more failures than the second. However, the difference between just the two peak failure years is less stark: about 3.1 percent of IDIs failed in 1989 compared with about 2 percent in 2010 (calculated as a percentage of IDIs in existence at the previous year's end). When we compare failed assets as a percentage of industry assets (excluding the systemic risk transactions during the recent crisis), the peaks are also similar: about 3.3 percent in 1989 versus about 2.7 percent in 2008, but the latter is driven by the failure of one institution (Washington Mutual). Including the systemic risk transactions would raise the figure during the recent crisis to almost 16 percent of industry assets.



Losses

Another way to compare the two crises is to look at losses to the deposit insurance funds generated by IDI failures. Again, the first crisis is significantly larger: when converted into 2013 dollars, losses in the earlier crisis reach about \$360 billion.³³ Losses during the recent crisis amount to about \$68 billion in 2013 dollars.³⁴ When we

³³ These figures are derived from data on losses associated with individual institutions, so far as they are available (data on losses from individual FSLIC-insured institutions in the early 1980s are incomplete). Additional costs relating to the S&L crisis are not included, but the comparative magnitudes are nevertheless valid. For a review of the costs of the S&L crisis, see Curry and Shibut (2000).

³⁴ Failed bank losses during the recent crisis could have been much larger were it not for the acquisition by other banks of large institutions that turned out to be troubled. One such acquisition was Wachovia's 2006 acquisition of World Savings Bank (a subsidiary of Golden West Financial) with assets of about \$125 billion. Although the losses at World Savings Bank severely damaged Wachovia, which was acquired by Wells Fargo during the crisis in 2008, there were no losses to the Deposit Insurance Fund (DIF). Similarly, Bank of America acquired Countrywide Financial Corp and its subsidiary Countrywide FSB in 2008. With about \$116 billion in assets, the thrift's failure could have generated significant losses to the DIF. Although it is impossible to know precisely what the costs to the DIF might have been had troubled institutions not been acquired and instead failed, those costs would have been substantial and would have greatly increased failed bank costs during the recent crisis.

compare these costs as a percentage of GDP, the costs of the first crisis were far greater: 4.2 percent (of 1980 GDP) versus just 0.5 percent (of 2008 GDP). The difference between costs as a percentage of industry assets is fairly similar to the costs as a percentage of GDP: about 4.8 percent of 1980 assets versus 0.5 percent of 2008 assets.

Rather than comparing total losses, one could examine loss rates at institutions during both crises.³⁵ Given the extended duration of the crisis of the 1980s and early 1990s, the data in this discussion compare a six-year period (1987 to 1992) that includes the previous crisis peak with the entirety of the recent crisis (Table 1). The systemic risk assistance transactions in 2008 and 2009 are excluded, as losses were not applicable to those institutions (unlike assistance transactions during the previous crisis, which did generate losses). During the recent crisis, the median loss rate for all failures was almost 19 percent higher than for the peak of the previous crisis (23.62 percent versus 19.87 percent), and median loss rates were higher for the recent crisis among both small and larger institutions. The reverse is true when average loss rates are compared: average loss rates were higher during the peak of the previous crisis. However, given the effect of the very large zero-cost failure (a failure that did not involve cost to the Deposit Insurance Fund, or DIF) of Washington Mutual in 2008, a better comparison might exclude that institution. Excluding all zero-cost failures, the average loss rate during the recent crisis is similar to the average loss rate during the peak years of the previous crisis (20.84 percent during the recent crisis versus 22.9 percent during the peak years of the previous crisis).

Average loss rates for small and midsized institutions were actually higher during the peak of the first crisis, but average loss rates for the largest institutions were significantly higher during the recent crisis (although this measure is greatly influenced by the high cost of the IndyMac failure among a relatively small number of institutions). Many FSLIC/RTC failed institutions had negative equity because they remained open so long before resolution, which increased their loss rates. This helps explain why average loss rates appear higher during the peak of the first crisis, as similar delayed closures and institutions with negative equity were not a feature of the recent crisis.³⁶

Table 1										
Comparison of Loss Rates: 1987–1992 (I) vs. 2008–2013 (II)										
	Number of Institutions		Median Loss Rate (Percent)		Average Loss Rate (Percent)		Number Zero-Cost Institutions		Average Loss Rate Excluding Zero-Cost Institutions (Percent)	
	I	II	I	II	I	II	I	II	I	II
All Failed	2078	489	19.87	23.62	21.95	10.33	49	7	22.90	20.05
Less Than \$1B	1844	417	20.72	24.25	28.89	23.02	41	3	30.03	23.33
\$1B–\$10B	214	63	14.11	17.37	25.03	15.22	7	2	26.01	16.25
\$10B+	20	9	9.16	11.33	11.16	5.76	1	2	11.75	21.78

Source: FDIC
 Note: Asset sizes and loss totals are in 2013 dollars; assets are as of quarter before failure, and loss data are as of December 31, 2018. Data for 2008–2013 exclude systemic risk transactions.

³⁵ An institution's loss rate equals the estimated cost of the failure as a percentage of the institution's total assets at the quarter before failure. This amount is calculated using estimated losses as of December 31, 2018.

³⁶ Calculating loss rates for 1987 to 1992, but only for all FDIC-insured institutions, yields a median loss rate that is very similar (19.32 percent) to that for all institutions, but the average loss rates drop considerably. For example, the average loss rate excluding zero-cost institutions for all FDIC-insured failures is only 14.54 percent. For another comparison of loss rates during the two crises that uses a subset of FDIC-insured failures, see Balla, Prescott, and Walter (2015).

Failed Bank Assets

There is one comparison where the magnitude of the most recent crisis seems considerably larger than the first: total failed bank assets. Using 2013 dollars, total failed bank assets for the recent crisis were \$4.2 trillion compared with \$1.8 trillion for the earlier crisis. However, this statistic is somewhat misleading, because when failed bank assets are measured as a percentage of industry assets, the numbers for the two crises are very similar: 28.3 percent of industry assets in 2008 versus 23.9 percent of industry assets in 1980. Arguably, the Bank of America assistance transaction should be excluded, as it was never actually completed.³⁷ With that transaction excluded, total failed bank assets during the recent crisis fall to about \$2.2 trillion, or 14.4 percent of industry assets in 2008. If *all* systemic risk assistance transactions are excluded, total failed bank assets during the recent crisis drop to about \$740 billion, or just 4.9 percent of industry assets in 2008; almost 45 percent of the \$740 billion stems from the failure of Washington Mutual in September 2008.

Problem Banks and Problem Bank Assets

Comparing the number of problem institutions during the two crises provides a different yardstick, one that measures troubled banks instead of failures (Figure 20). Problem banks are generally those to which regulators have given a supervisory rating of 4 or 5 and which are deemed in danger of failing.³⁸ However, not all problem banks fail. For example, during the recent crisis, fewer than a third of problem banks failed. Although the approximate peak in the number of problem institutions measured at year-end was much higher during the first crisis (2,165 at year-end 1987 versus 884 at year-end 2010),³⁹ the number of problem institutions as a percentage of all institutions was fairly similar (12.5 percent in 1987 versus 11.5 percent in 2010). The trends in problem banks suggest a gradual increase in industry difficulties during the 1980s and the much more compressed nature of the recent crisis.

In a comparison of problem-bank assets as a percentage of all assets, the first crisis seems significantly more severe. During the recent crisis, this number peaked at just over 3 percent in 2009; during the previous crisis, the number peaked at 18.4 percent in 1991 and had been above or near 10 percent for much of the previous decade. However, the nature of the recent financial crisis meant that problem bank assets are arguably understated. For example, Washington Mutual, with more than \$300 billion in assets, was downgraded to a rating of 4 but failed almost immediately thereafter in September 2008.⁴⁰ Wachovia Bank, with nearly \$700 billion in assets, had been downgraded to a rating of 3 in June, and its component ratings were downgraded significantly in September 2008.⁴¹ Wachovia was to receive open-bank assistance but was acquired by Wells Fargo in October 2008. Although Citibank did not reach the problem bank list, its condition had deteriorated and the bank received open-bank assistance in November 2008.⁴² Assets of these banks were not formally classified as problem-bank assets, but had they been, the two crises would have had a similar peak ratio of problem-bank assets to industry assets.

³⁷ The Federal Reserve and the FDIC announced an assistance agreement in principle on January 16, 2009, but the Treasury Secretary never formally made a systemic risk determination. In May 2009, Bank of America requested the agreement be terminated. Bank of America agreed to pay the Treasury, the Federal Reserve, and the FDIC \$425 million for termination to take place. See GAO (2010), 10. Bank of America received \$45 billion in TARP assistance, which it repaid in December 2009.

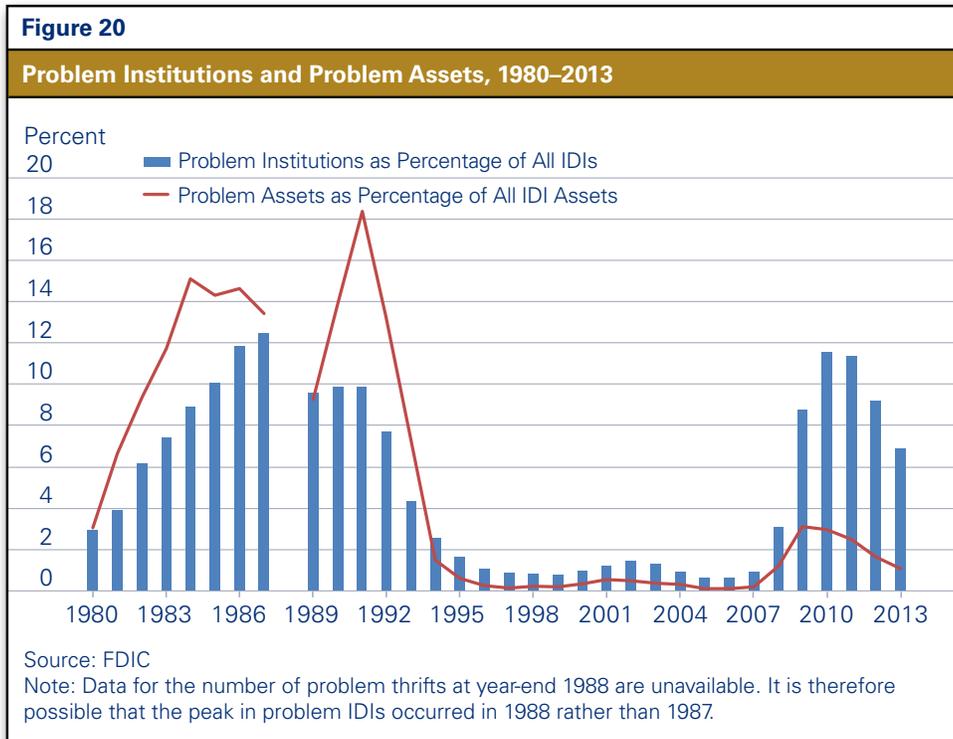
³⁸ It is possible for an institution to be a problem bank and have a rating of 3. Bank supervisory ratings, or CAMELS composite ratings, are on a scale of 1 to 5, with a rating of 1 being the highest and indicating greatest strength in performance and risk management and the least level of supervisory concern. A rating of 5 is the lowest rating and indicates the weakest performance, inadequate risk management, and the highest level of supervisory concern. The CAMELS composite rating is derived from an evaluation of six components of an institution's financial condition and operations: adequacy of Capital, quality of Assets, capability of Management, quality and level of Earnings, adequacy of Liquidity, and Sensitivity to market risk. Although the composite rating is generally a close reflection of the assigned component ratings, it is not an arithmetic average of the component ratings.

³⁹ The actual peak in problem banks during the recent crisis was 888 as of March 31, 2011; quarterly problem thrift data are unavailable for the earlier crisis. The analysis in this study therefore uses year-end data. No problem thrift data are available for 1988.

⁴⁰ U.S. Senate Committee on Homeland Security and Governmental Affairs, Permanent Subcommittee on Investigations (2011), 176.

⁴¹ See FDIC (2008a) in the materials collected by the Financial Crisis Inquiry Commission.

⁴² For a discussion of the assistance, see Office of the Special Inspector General for the Troubled Asset Relief Program (2011). See also FDIC (2008b).



Institution Size

Yet another way to measure the relative severity of the two crises is to look at the size of the institutions that failed. Larger institution failures have the potential to create greater financial and economic dislocation and are generally harder to resolve. During the recent crisis, most IDIs that failed were small, with a median size of \$236 million in 2013 dollars (Figure 21). However, some of the nation’s largest banks faced significant problems. Washington Mutual, which failed, was the sixth-largest bank. Bank of America, Citibank, and Wachovia—all of which either were approved for or received government assistance—were the second-, third- and fourth-largest banks.⁴³ During the previous crisis, most banks that failed were also small, with a median size of \$106 million (in 2013 dollars). However, large banks were also troubled, and Continental Illinois, the nation’s seventh-largest bank, failed. Although it might seem that the largest banks were in greater difficulty during the recent crisis, the less-developed country debt crisis in the early 1980s created significant difficulties for those institutions, and bank regulators practiced forbearance when it came to requiring large reserves on less-developed country loans. Had this not been the case, at least according to then-FDIC Chairman L. William Seidman, seven or eight of the ten largest banks in the United States might have been deemed insolvent.⁴⁴ For a comparison of the largest bank failure and assistance transactions during both crises, adjusted for inflation, see Table 2.

⁴³ Wachovia did not receive assistance because it was purchased by Wells Fargo. The Bank of America transaction was never completed, although the assistance was announced on January 16, 2009.

⁴⁴ FDIC (1997), 207.

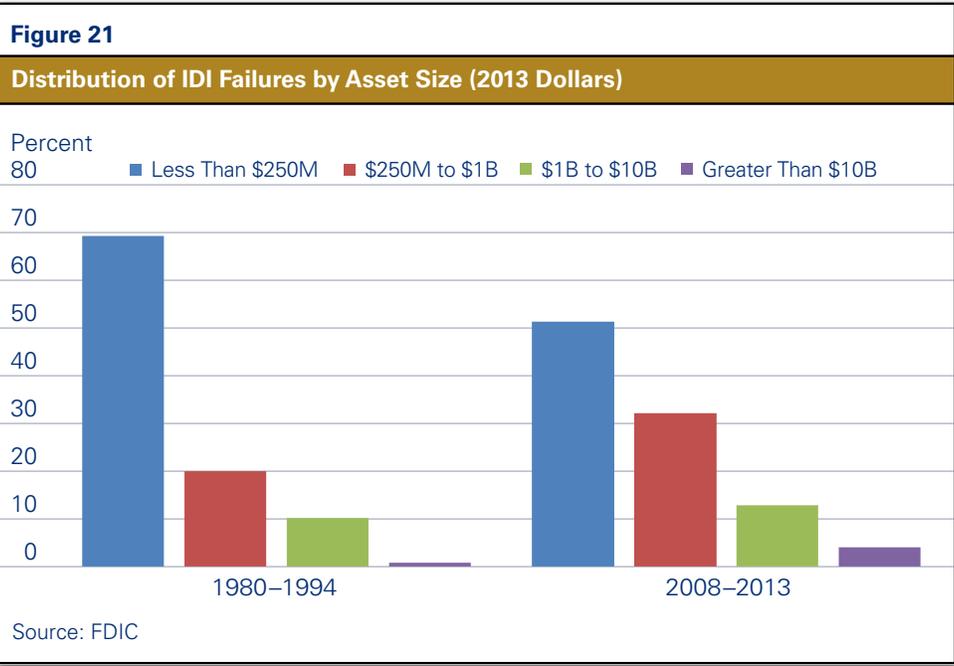


Table 2
Ten Largest Failed and Assisted Institutions by Asset Size During Both Crises (2013 Dollars)

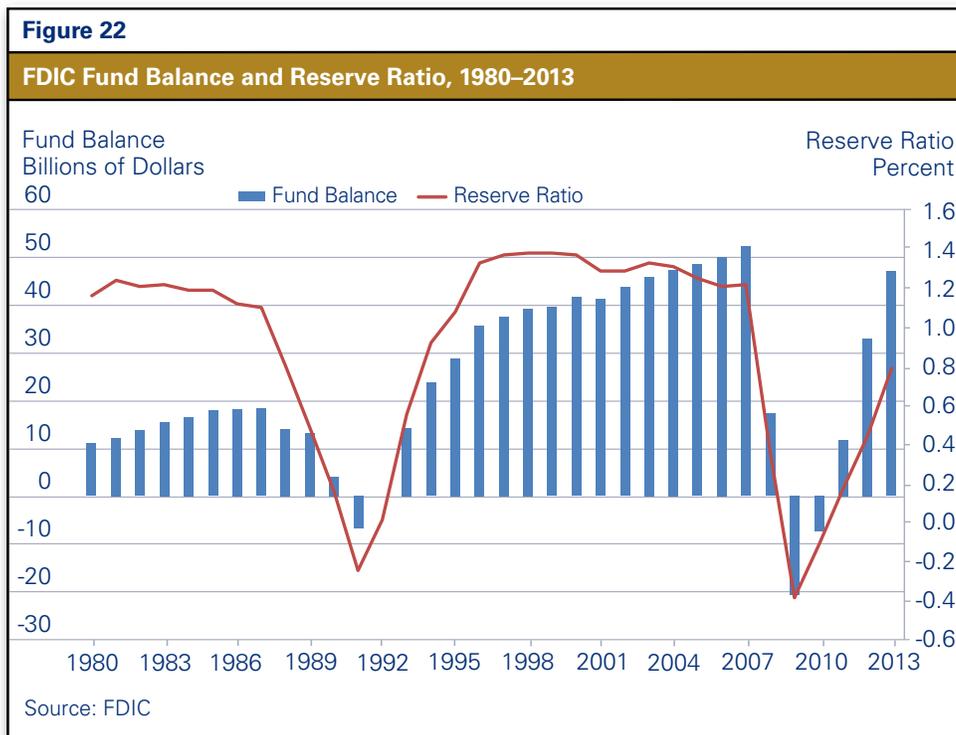
	Institution Name	Failure or Assistance Date	Assets (\$000s)	Institution Name	Failure or Assistance Date	Assets (\$000s)
1	Continental Illinois National Bank and Trust	05/17/1984	89,561,280	Bank of America Corporation	01/16/2009	2,081,870,992
2	First Republic Bank Corporation	07/29/1988	62,377,513	Citigroup, Inc.	11/23/2008	1,413,472,191
3	American Savings & Loan Association	09/07/1988	59,408,942	Washington Mutual Bank	09/25/2008	332,276,079
4	Bank of New England Corporation	01/06/1991	37,099,608	IndyMac Bank, F.S.B.	07/11/2008	33,223,658
5	MCORP	03/28/1989	29,397,993	Colonial Bank	08/14/2009	27,637,419
6	First City Bancorporation of Texas, Inc.	04/20/1988	25,550,612	FBOP Corporation	10/30/2009	21,031,572
7	Gibraltar Savings Association	03/31/1989	25,153,272	Guaranty Bank	08/21/2009	14,618,672
8	First Pennsylvania Bank, N.A.	04/28/1980	22,489,357	BankUnited, F.S.B.	05/21/2009	14,235,530
9	HomeFed Bank, F.A.	07/06/1992	20,215,707	Downey Savings and Loan Association, F.A.	11/21/2008	13,830,555
10	Southeast Bank, N.A.	09/19/1991	18,864,908	AmTrust Bank	12/04/2009	12,419,673

Source: FDIC

Note: For banking organizations with multiple IDIs, the asset total is the sum of all IDI assets within the organization. Regarding the inclusion of Bank of America Corporation, although the assistance package announced in January 2009 was not ultimately provided, Bank of America Corporation later compensated the Treasury, the FDIC, and the Federal Reserve Bank of New York for the benefits the announcement itself might have provided. See FDIC (2017), 91.

The Deposit Insurance Funds During the Crises

An examination of the deposit insurance funds during both crises provides another point of comparison, but it is complicated by the discontinuity in the provision of deposit insurance to the S&L industry. The FSLIC was the deposit insurer of S&Ls until August 1989, at which point the RTC (which Congress had created for the purpose) began using appropriated funds to resolve failed S&Ls before winding down its operations in 1995.⁴⁵ This analysis is confined to comparing the FDIC fund in both periods, as it is not possible to aggregate the FSLIC fund, the FDIC fund, and RTC funding into one comprehensive series. However, it is important to recall that by 1986 the FSLIC fund was insolvent (having reached negative \$6.3 billion in reserves, and just two years later dropping to negative \$75 billion) and that the RTC would receive more than \$90 billion in public sector funds to resolve failed thrifts.⁴⁶ Had there been a single deposit insurance fund for both banks and thrifts during the first crisis, that fund would have faced a much larger loss than the FDIC fund faced: its balance would have been negative much earlier and that negative balance would have been significantly greater than the one that occurred in the FDIC's fund. That being said, a comparison of FDIC fund performance in the two crises, and the actions taken by the FDIC in both periods, is still informative.



During both crises, the deposit insurance fund faced significant losses. Trends in the fund balance and in the reserve ratio (which is determined by dividing the fund balance by the estimated amount of deposits insured, and is both a measure of fund adequacy and the FDIC's exposure) mirrored trends in bank failures (Figure 22). The gradual nature of the increase in failures during the 1980s meant that the fund did not drop sharply until the crisis was well underway. In contrast, the speed of the recent crisis generated a precipitous drop in the fund almost

⁴⁵ FIRREA renamed the original FDIC deposit insurance fund the Bank Insurance Fund and created the Savings Association Insurance Fund as a successor to the FSLIC fund, but one that would be administered by the FDIC. For all calculations after FIRREA, data for the two funds are combined. The funds were combined by statute in 2006 to form the DIF.

⁴⁶ FDIC (1997), 168. The RTC did not use all the funds provided, and the actual public sector cost ended up being a lower amount. See Curry and Shibut, 31.

immediately, and both the fund balance and reserve ratio sank to their lowest levels in FDIC history. In response to both crises, the FDIC significantly raised assessment rates and took other extraordinary measures to bolster the fund. In each crisis, once bank failures had decreased, the fund recovered relatively quickly.⁴⁷

In the 1980s, the FDIC fund had reached almost \$10 billion before the crisis began. Since failures did not reach extremely high levels until the mid-1980s, the fund continued to grow, peaking at just over \$18 billion in 1987. The massive number of bank failures that followed caused a swift decline in the fund balance, and for the first time in the FDIC's history, the balance sank below zero on an accounting basis (the FDIC reserves for expected losses), to negative \$6.9 billion in 1991. To address working capital needs, the FDIC borrowed from the Federal Financing Bank (FFB) during 1991 to 1993, with peak borrowing of about \$15 billion in 1992. The borrowing was repaid with interest. By 1993, failures had decreased significantly and that decrease—combined with greatly increased assessment rates (which reached 23 basis points in 1991, up from just over 8 basis points in 1988)—not only allowed the fund to grow but also brought it to a new high of almost \$24 billion in 1994. The reserve ratio had stood at 1.16 percent in 1980. After dropping only slightly during the early part of the first crisis, the reserve ratio sank quickly as losses from failures increased, reaching negative 0.25 percent in 1991.⁴⁸ By 1996, aided by a special assessment to capitalize the Savings Association Insurance Fund, the reserve ratio stood at 1.33 percent.

By year-end 2007, the DIF balance had grown to about \$52 billion and the reserve ratio stood at 1.22 percent. Just two years later, because of the increased number of failures and the need to reserve for expected losses, the fund reached an all-time low of negative \$20.9 billion (on an accounting basis) and a reserve ratio of negative 0.39 percent.⁴⁹ In September 2009, the FDIC imposed a one-time 5 basis point special assessment on each IDI, based on an institution's assets minus Tier 1 capital.⁵⁰ Also in 2009, to ensure that the FDIC had enough liquidity to handle the increasing number of failures, the FDIC adopted a policy whereby IDIs prepaid their deposit insurance assessments for three years, obviating the need to use its line of credit with the U.S. Treasury.⁵¹ From 2007 to 2008, banks posing the least risk to the fund had paid assessment rates of 5 to 7 basis points, while the riskiest banks paid rates of 43 basis points. By early 2009, these rates had increased to 12 to 14 basis points for the least risky banks and 50 basis points for the riskiest; in April 2009, rates increased yet again, with the least-risky banks paying 7 to 24 basis points and the riskiest 40 to 77.5 basis points. It was not until two years later, in April 2011, that the FDIC could reduce assessment rates for the first time since the recent crisis began; rates changed to 2.5 to 9 basis points for the least-risky banks and 30 to 45 basis points for the riskiest. Although the deposit insurance funds (hence the banking industry, through assessments paid into the funds) were generally considered the primary means to handle IDI failures or assist troubled institutions, both crises forced the federal government to use another source of funds for these purposes.

⁴⁷ One significant difference between the two crises was the timing of increases in deposit insurance coverage. In 1980, just as IDI problems were beginning, Congress increased the basic deposit insurance coverage level from \$40,000 to \$100,000. The FDIC opposed the large increase at the time and many observers believe the increase exacerbated IDI losses in the 1980s and early 1990s (see FDIC [1997], 93). But during the second crisis, it was not until October 2008, in the depth of the crisis, that Congress temporarily increased the basic coverage level from \$100,000 to \$250,000 to maintain confidence in the banking system; the increase was one of many emergency measures supported by the FDIC. The temporary increase in coverage was later made permanent by the Dodd-Frank Act.

⁴⁸ For more information on the history of the deposit insurance fund, see Davison and Carreon (2010).

⁴⁹ For a discussion of the FDIC's management of the DIF during the crisis, see FDIC (2017), chapter 5.

⁵⁰ FDIC (2009a). The FDIC has statutory authority to borrow on an interest-bearing basis from the Treasury, with the Treasury Secretary's approval. In 2009, Congress permanently increased the maximum amount the FDIC could borrow in this way from \$30 billion to \$100 billion. At the same time, Congress temporarily increased the limit to \$500 billion through 2010, although amounts over \$100 billion required the concurrence of the FDIC Board, the Federal Reserve Board, and the Secretary of the Treasury in consultation with the President. In addition to this authority, the FDIC may also borrow from the Treasury Department's FFB subject to a "maximum obligation limitation" that depends in part on the value of DIF assets. See FDIC (2017), 157.

⁵¹ FDIC (2009b).

The Use of Appropriated Funds During the Crises

The federal government chose to use appropriated funds (i.e., taxpayer funds) to address both crises. However, the methods adopted during the two crises differed significantly. Essentially, the difference boils down to a comparison of the RTC, created in 1989, with the TARP, created in 2008. The RTC's mission was to resolve insolvent S&Ls and return their assets to the private sector. As is evident from its name, the TARP was also seen as a means to handle problem assets (although more broadly than for just IDIs), but TARP funds funneled to IDIs were used quite differently than originally intended.⁵²

During the first crisis, the FSLIC had become insolvent even as losses in FSLIC-insured institutions continued to rise. The effort to recapitalize the FSLIC through the sale of bonds authorized by the Competitive Equality Banking Act of 1987 (the interest on these bonds was paid by the industry) proved insufficient, and Congress eventually created the RTC in 1989 to resolve insolvent thrifts and handle the large volume of those thrifts' assets. The RTC would eventually handle about \$450 billion (not adjusted for inflation) in failed thrift assets and would receive \$91.3 billion in appropriated funds to make good the losses in insolvent institutions.⁵³ (No appropriated funds were used to resolve FDIC-insured institutions during the banking and thrift crisis, although as noted above, the FDIC did borrow from the FFB.) As the losses in these institutions had already been incurred, and with the thrift industry in severe distress, appropriated funds were the only way to expeditiously manage the thrift crisis. Although suggestions arose that another RTC was needed to address the situation as it unfolded in 2008, the federal government adopted a different method during the recent crisis.

The TARP was authorized by Congress under the Emergency Economic Stabilization Act of 2008. Originally, the intention was that a significant portion of TARP funds would be used to purchase troubled assets from financial institutions. However, with respect to banks, TARP funds were primarily used to inject capital into both banks and bank holding companies by purchasing stock in firms that applied for and were approved for such purchases.⁵⁴ This strategy of injecting capital, which was designed to strengthen open banks and the financial system, was analogous to the one the federal government had pursued with the Reconstruction Finance Corporation during the Great Depression.⁵⁵ Unlike RTC funds, which had been used to resolve failed institutions, financial institutions in the recent crisis were expected to repurchase TARP capital from the government; TARP funds therefore would be repaid, and the government would receive dividends while it held the capital in those firms. Unless large numbers of assisted banks failed, TARP capital injections should have yielded a profit.

The U.S. Treasury invested about \$245 billion through its TARP banking programs, the vast majority (about \$205 billion) in 707 institutions through the TARP's Capital Purchase Program (CPP). In addition to investments through the CPP, TARP investments in banks were made through the Targeted Investment Program (\$20 billion each to Citigroup and Bank of America Corporation), the Asset Guarantee Program (\$5 billion to Citigroup), and the Community Development Capital Initiative (\$570 million to 84 institutions). As of September 30, 2018, the Treasury had recovered just over \$275 billion from its TARP banking programs, so income earned from those investments had more than offset the losses caused by institutions that failed.⁵⁶

⁵² During the recent crisis, the federal government (often the Federal Reserve) put in place numerous emergency programs designed to support the financial system. This discussion is limited to appropriated funds aimed specifically at IDIs or their parent holding companies.

⁵³ Most RTC funding occurred as direct appropriations, but some funding was generated through the sale of bonds. The RTC did not use all the funds it received; as of its closure, it had used \$87.9 billion. Additional appropriated funds were paid to the FSLIC Resolution Fund, which was responsible for losses in failed FSLIC institutions before the passage of FIRREA.

⁵⁴ On the switch from asset purchases to capital injections, see Swagel (2009), 50ff. Nine institutions (Bank of America, Citigroup, JPMorgan Chase, Wells Fargo, Morgan Stanley, Goldman Sachs, Bank of New York Mellon, State Street, and Merrill Lynch) subscribed for \$125 billion in TARP assistance on October 14, 2008. Swagel notes that "most (but not all)" required little persuasion to take the assistance.

⁵⁵ The Reconstruction Finance Corporation's power to purchase preferred stock in banks was authorized by the Banking Act of 1933, which also created the FDIC. Most of the purchases were made between 1933 and 1935. See Mason (2001).

⁵⁶ See U.S. Treasury (2018), 15–16. Because the \$5 billion in the Asset Guarantee Program was not an actual cash outlay, it is not treated as an expenditure.

The government's use of appropriated funds during both crises was dissimilar. During the first crisis, losses already incurred had to be paid for to maintain the government's promise to insured depositors; during the recent crisis, funds were intended to strengthen IDIs and their parent holding companies and help them weather the banking crisis.⁵⁷

Conclusion

Although the two banking crises exhibited many similarities, there were also important differences. In the broadest terms, the economic circumstances were quite different. During the first crisis, a series of regional and sectoral booms and busts (along with the longer-term S&L problems) transpired over a decade and a half. The second crisis took place in the context of a widespread housing boom and bust, a systemic financial crisis, and a nationwide deep recession, and lasted less than half as long. But during both crises, a dominant feature of the landscape of IDI failures was the combination of real estate lending, speculation, and poor underwriting in boom times. The intensity of the banking problems, combined with the threat that the wider crisis posed to the nation's economic system, confirms that the recent crisis was the worst economic crisis since the Great Depression. Nevertheless, by comparing the dislocations in the banking and thrift industries during the earlier crisis with those same dislocations during the recent crisis, we are reminded just how serious the problems were in the 1980s and early 1990s. Regardless of how the two crises are measured or compared, it is clear that they both posed significant challenges for the FDIC.

⁵⁷ For a recent review of the TARP and how it worked in practice, see Calomiris and Khan (2015).

References

- Barth, James R., Tong Li, Triphon Phumiwasana, and Glenn Yago. 2008. "A Short History of the Subprime Mortgage Market Meltdown." Milken Institute.
<https://assets1c.milkeninstitute.org/assets/Publication/ResearchReport/PDF/SubprimeMeltdownv2.pdf>.
- Berger, Allen N., Lamont K. Black, Christa H. S. Bouwman, and Jennifer Dlugosz. 2017. "Bank Loan Supply Responses to Federal Reserve Emergency Liquidity Facilities." *Journal of Financial Intermediation* 32, 1–15.
- Balla, Eliana, Edward S. Prescott, and John R. Walter. 2015. "Did the Financial Reforms of the Early 1990s Fail? A Comparison of Bank Failures and FDIC Losses in the 1986–92 and 2007–13 Periods," Working Paper No. 15-05, Federal Reserve Bank of Richmond.
https://www.richmondfed.org/publications/research/working_papers/2015/wp_15-05.
- Brave, Scott A., and Hesna Genay. 2011. "Federal Reserve Policies and Financial Market Conditions During the Crisis," Federal Reserve Bank of Chicago Working Paper No. 2011-04.
<https://www.chicagofed.org/publications/working-papers/2011/wp-04>.
- Calomiris, Charles W., and Urooj Khan. 2015. "An Assessment of TARP Assistance to Financial Institutions." *Journal of Economic Perspectives* 29, no. 2: 53–80.
- Chomsisengphet, Souphala, and Anthony Pennington-Cross. 2006. "The Evolution of the Subprime Mortgage Market." Federal Reserve Bank of St. Louis *Economic Review* 88, no. 1: 37–38.
<https://research.stlouisfed.org/publications/review/2006/01/01/the-evolution-of-the-subprime-mortgage-market/>.
- Curry, Timothy, and Lynn Shibut. 2000. "The Cost of the Savings and Loan Crisis: Truth and Consequences." *FDIC Banking Review* 13, no. 2: 26–35.
<https://www.fdic.gov/bank/analytical/banking/br2000v13n2.pdf>.
- Davison, Lee K., and Ashley M. Carreon. 2010. "Toward a Long-Term Strategy for Deposit Insurance Fund Management." *FDIC Quarterly* 4, no. 4: 29–39.
<https://www.fdic.gov/bank/analytical/quarterly/2010-vol4-4/fdic-quarterly-v4n4-fundmgmt-121610.pdf>.
- Federal Deposit Insurance Corporation. 2017. *Crisis and Response: An FDIC History, 2008–2013*. FDIC.
<https://www.fdic.gov/bank/historical/crisis/>.
- . 1997. *History of the Eighties, Lessons for the Future: An Examination of the Banking Crises of the 1980s and Early 1990s*. Vol.1. FDIC.
<https://www.fdic.gov/bank/historical/history/vol1.html>.
- . 1998. *Managing the Crisis: The FDIC and RTC Experience*. Vol.1. FDIC.
<https://www.fdic.gov/bank/historical/managing/>.
- . 2008a. Memorandum to the Board of Directors on Wachovia Corporation. September 29, 2008.
http://fcic-static.law.stanford.edu/cdn_media/fcic-docs/2008-09-29_Memo_to_the_FDIC_Board_of_Directors.pdf.
- . 2008b. Memorandum to the Board of Directors on Citigroup. November 23, 2008.
http://fcic-static.law.stanford.edu/cdn_media/fcic-docs/2008-11-23%20Memo%20to%20the%20FDIC%20Board%20fromJames%20R.%20Wigand%20and%20Herbert%20J.%20Held%20re%20recommendation%20for%20systemic%20risk%20determination%20for%20Citigroup.pdf.
- . 2009a. Special Assessment, Final Rule. FIL-23-2009.
<https://www.fdic.gov/news/news/financial/2009/fil09023.pdf>.
- . 2009b. Prepaid Assessments, Final Rule. FIL-63-2009.
<https://www.fdic.gov/news/news/financial/2009/fil09063.pdf>.
- . 2012. *Community Banking Study*. FDIC.
<https://www.fdic.gov/regulations/resources/cbi/report/cbi-full.pdf>.
- Federal Deposit Insurance Corporation, Office of Inspector General. 2012. *Acquisition, Development, and Construction Loan Concentration Study*. Report EVAL-13-001
<https://www.fdic.gov/sites/default/files/publications/13-001EV.pdf>.

- Government Accountability Office. 2010. *Federal Deposit Insurance Act: Regulators' Use of Systemic Risk Raises Moral Hazard Concerns and Opportunities Exist to Clarify the Provision*. GAO-10-100. <https://www.gao.gov/new.items/d10100.pdf>.
- . 2013. *Causes and Consequences of Recent Bank Failures*. GAO-13-71. <https://www.gao.gov/assets/660/651154.pdf>.
- Kupiec, Paul, Katherine Samolyk, Martha Solt, and Ross Waldrop. 2011. "Examining the Data: Bank Failures and Resolutions from 2007 to 2010." Unpublished manuscript.
- Lee, Yan, and Chiwon Yom. 2016. "The Entry, Performance, and Risk Profile of De Novo Banks." FDIC-CFR-WP 2016-03. <https://www.fdic.gov/bank/analytical/cfr/2016/wp2016/2016-03.pdf>.
- Lo, Andrew W. 2012. "Reading about the Financial Crisis: A Twenty-One-Book Review." *Journal of Economic Literature* 50, no. 1: 151–78.
- Mason, Joseph R. 2001. "Do Lender of Last Resort Policies Matter? The Effects of Reconstruction Finance Corporation Assistance to Banks During the Great Depression." *Journal of Financial Services Research* 20, no. 1: 77–95.
- National Commission on Financial Institution Reform, Recovery, and Enforcement. 1993. *Origins and Causes of the S&L Debacle: A Blueprint for Reform*. The Commission.
- Sanches, Daniel. 2014. "Shadow Banking and the Crisis of 2007–08," *Federal Reserve Bank of Philadelphia Business Review* 97, no. 2 (2014), 7–14. https://www.philadelphiafed.org/-/media/research-and-data/publications/business-review/2014/q2/brq214_shadow_banking.pdf?la=en.
- Swagel, Phillip. 2009. "The Financial Crisis: An Inside View." *Brookings Papers on Economic Activity* 2009:1–63. <https://www.brookings.edu/bpea-articles/the-financial-crisis-an-inside-view/>.
- U.S. Senate Committee on Homeland Security and Governmental Affairs, Permanent Subcommittee on Investigations. 2011. *Wall Street and the Financial Crisis: Anatomy of a Financial Collapse*. Majority and Minority Staff Report. 112–675. 112th Congress, 1st session. [https://www.hsgac.senate.gov/imo/media/doc/PSI%20REPORT%20-%20Wall%20Street%20&%20the%20Financial%20Crisis-Anatomy%20of%20a%20Financial%20Collapse%20\(FINAL%205-10-11\).pdf](https://www.hsgac.senate.gov/imo/media/doc/PSI%20REPORT%20-%20Wall%20Street%20&%20the%20Financial%20Crisis-Anatomy%20of%20a%20Financial%20Collapse%20(FINAL%205-10-11).pdf).
- U.S. Treasury. 2018. *Agency Financial Report. Office of Financial Stability, Troubled Asset Relief Program, Fiscal Year 2018*. [https://www.treasury.gov/initiatives/financial-stability/reports/Documents/FY2018%20OFS%20AFR%20\(Final\).pdf](https://www.treasury.gov/initiatives/financial-stability/reports/Documents/FY2018%20OFS%20AFR%20(Final).pdf).

Appendix

Number and Percentage of Failed Institutions and Failed Institution Assets by State, 1980–1994 (I) and 2008–2013 (II)

State	Failures		Failed Institutions as a Percentage of State Institutions		Failed Institution Assets		Failed Institution Assets as a Percentage of State Assets	
	I	II	I	II	I	II	I	II
AK	13	0	52.00%	0.00%	\$6,585,246	\$0	43.07%	0.00%
AL	23	7	5.57%	4.38%	\$8,656,569	\$33,930,950	9.30%	12.97%
AR	33	2	9.76%	1.38%	\$12,918,762	\$2,256,314	21.29%	3.51%
AZ	26	15	27.66%	26.32%	\$35,789,583	\$2,505,183	34.50%	11.92%
CA	200	41	21.48%	12.62%	\$264,969,526	\$136,906,997	21.72%	19.70%
CA *	N/A	39	N/A	12.00%	N/A	\$112,129,832	N/A	16.73%
CO	83	9	13.41%	5.84%	\$20,641,583	\$8,192,227	25.85%	15.41%
CT	41	1	19.25%	1.69%	\$32,711,512	\$26,368	21.80%	0.03%
DC	8	0	22.22%	0.00%	\$6,896,958	\$0	32.26%	0.00%
DE	1	2	1.47%	4.17%	\$1,147,024	\$194,534,672	0.77%	16.25%
DE *	N/A	0	N/A	0.00%	N/A	\$0	N/A	0.00%
FL	111	70	10.29%	22.01%	\$126,547,327	\$41,455,883	29.19%	21.96%
GA	27	87	4.13%	25.66%	\$9,326,165	\$35,393,447	5.29%	11.70%
HI	4	0	13.33%	0.00%	\$145,846	\$0	0.28%	0.00%
IA	68	2	9.13%	0.52%	\$11,366,459	\$641,670	13.82%	0.87%
ID	4	1	9.52%	5.26%	\$1,333,283	\$532,721	6.24%	7.49%
IL	130	56	7.93%	8.45%	\$156,689,094	\$36,987,829	26.90%	8.40%
IN	28	3	5.16%	1.85%	\$5,083,015	\$5,334,049	3.93%	7.10%
KS	98	9	13.24%	2.58%	\$31,398,712	\$5,108,946	34.28%	7.47%
KY	18	2	4.06%	1.00%	\$3,348,177	\$655,555	3.73%	1.18%
LA	153	2	31.74%	1.23%	\$36,187,121	\$656,616	33.03%	0.90%
MA	52	1	11.53%	0.54%	\$59,305,704	\$262,287	19.09%	0.07%

Appendix (Continued)

Number and Percentage of Failed Institutions and Failed Institution Assets by State, 1980–1994 (I) and 2008–2013 (II)

State	Failures		Failed Institutions as a Percentage of State Institutions		Failed Institution Assets		Failed Institution Assets as a Percentage of State Assets	
	I	II	I	II	I	II	I	II
MD	21	8	7.89%	8.25%	\$15,427,036	\$2,178,428	8.59%	6.20%
ME	5	0	5.81%	0.00%	\$4,544,402	\$0	15.20%	0.00%
MI	16	13	3.46%	7.93%	\$9,718,487	\$5,004,137	4.03%	8.43%
MN	52	22	6.19%	5.06%	\$14,589,265	\$3,225,235	11.94%	4.86%
MO	68	16	7.62%	4.49%	\$26,251,695	\$2,754,134	15.75%	1.72%
MS	30	2	12.45%	2.11%	\$5,812,369	\$301,051	11.70%	0.48%
MT	13	0	6.74%	0.00%	\$908,599	\$0	5.74%	0.00%
NC	15	8	5.51%	7.14%	\$6,578,156	\$1,600,432,492	3.18%	48.83%
NC*	N/A	7	N/A	6.25%	N/A	\$2,636,166	N/A	0.16%
ND	14	0	7.41%	0.00%	\$2,934,268	\$0	9.96%	0.00%
NE	41	3	7.68%	1.23%	\$4,363,982	\$3,274,377	7.90%	4.81%
NH	18	0	13.04%	0.00%	\$9,850,185	\$0	25.19%	0.00%
NJ	61	5	14.84%	3.91%	\$66,286,235	\$556,926	24.53%	0.38%
NM	28	3	20.00%	5.45%	\$9,522,304	\$3,636,007	28.19%	18.29%
NV	4	13	11.76%	31.71%	\$627,638	\$1,647,756,228	1.47%	93.07%
NV*	N/A	12		29.27%		\$341,465,285		73.57%
NY	67	5	13.79%	2.20%	\$158,673,140	\$42,294,129	9.13%	4.09%
NY*	N/A	4		1.76%		\$1,051,080		0.11%
OH	47	4	6.75%	1.57%	\$32,149,427	\$13,203,674	9.97%	0.49%
OK	162	5	24.81%	1.95%	\$31,907,904	\$908,684	34.56%	0.97%
OR	29	7	22.48%	17.07%	\$17,860,014	\$15,006,080	26.77%	43.33%
OR*	N/A	6	N/A	14.63%	N/A	\$2,491,602	N/A	11.27%

Appendix (Continued)

Number and Percentage of Failed Institutions and Failed Institution Assets by State, 1980–1994 (I) and 2008–2013 (II)

State	Failures		Failed Institutions as a Percentage of State Institutions		Failed Institution Assets		Failed Institution Assets as a Percentage of State Assets	
	I	II	I	II	I	II	I	II
PA	29	6	4.70%	2.51%	\$66,417,882	\$767,504	15.90%	0.35%
PR	10	3	32.26%	30.00%	\$5,020,681	\$20,223,402	10.62%	23.07%
RI	6	1	17.14%	7.14%	\$4,439,573	\$38,446,392	11.43%	27.20%
RI *	N/A	0	N/A	0.00%	\$0	\$0	N/A	0.00%
SC	9	9	5.29%	9.78%	\$3,087,287	\$3,144,918	4.77%	7.89%
SD	18	3	9.78%	3.33%	\$2,710,726	\$84,767,056	6.43%	2.96%
SD *	N/A	1	N/A	1.11%	N/A	\$228,920	N/A	0.01%
TN	59	5	12.39%	2.53%	\$9,894,877	\$2,280,156	8.49%	2.59%
TX	845	11	33.18%	1.69%	\$375,935,977	\$24,607,857	49.46%	5.37%
UT	19	7	14.96%	10.14%	\$9,133,034	\$70,560,804	24.33%	13.23%
UT *	N/A	6	N/A	8.70%	N/A	\$3,452,273	N/A	0.74%
VA	39	5	10.21%	4.03%	\$25,056,577	\$129,431,000	15.15%	17.39%
VA *	N/A	4	N/A	3.23%	N/A	\$1,337,508	N/A	0.22%
VT	2	0	5.13%	0.00%	\$534,585	\$0	3.97%	0.00%
WA	18	18	8.96%	18.37%	\$9,387,888	\$11,936,983	7.01%	14.64%
WI	7	8	0.93%	2.79%	\$1,385,758	\$2,243,037	1.10%	2.21%
WV	13	1	4.69%	1.49%	\$2,374,632	\$112,517	6.53%	0.39%
WY	27	1	19.57%	2.56%	\$2,624,189	\$76,205	19.33%	1.08%

Source: FDIC

Note: Total number of institutions is equal to the number of institutions reporting the quarter before the beginning of each crisis period (12/31/1979 and 12/31/2007), plus any new reporting institutions during each crisis period (through 12/31/1994 and 12/31/2013, respectively). Total assets are in 2013 dollars and are calculated as total institution assets at the end of each crisis period, plus the assets at failure of institutions that failed during the period. One failure that occurred in Guam during the first crisis is omitted.

*Excludes institutions that were part of an assistance transaction under the systemic risk exceptions granted in 2008–2009. States with such institutions appear twice and are shaded.